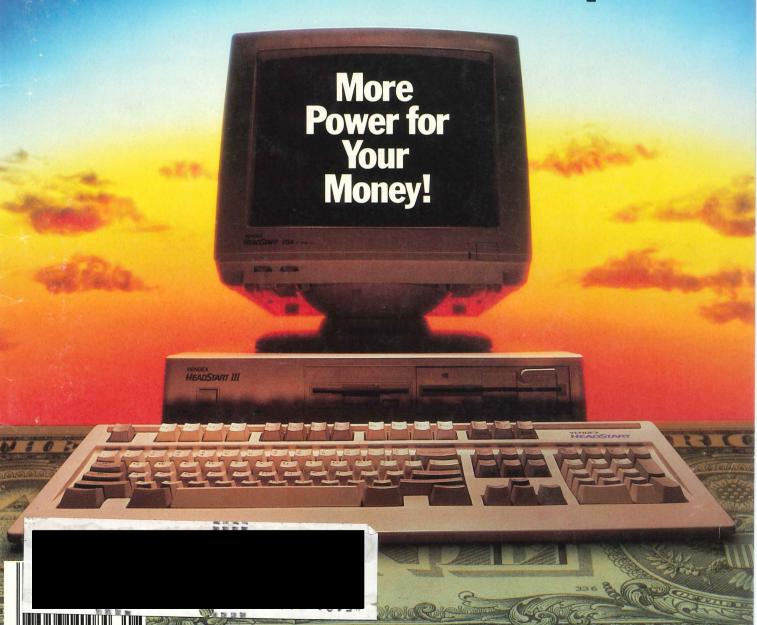
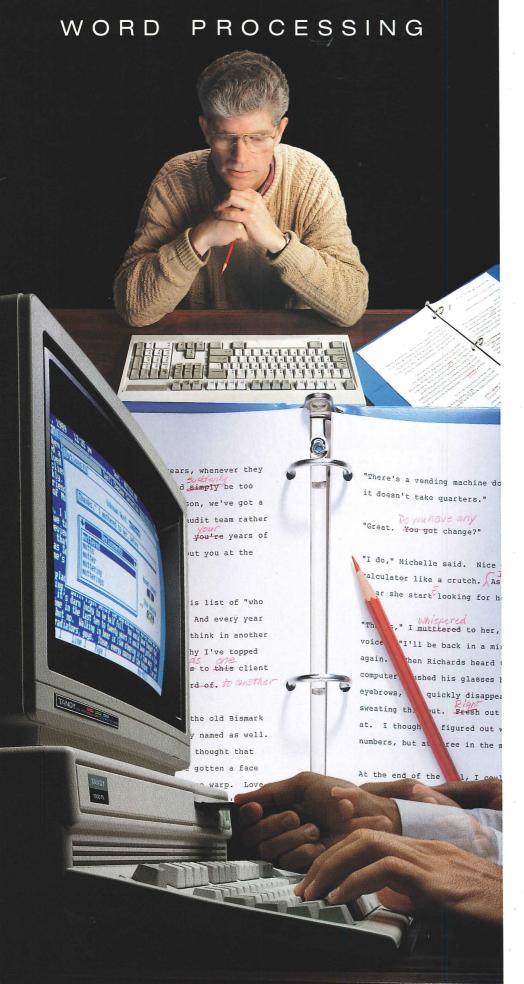
Special CES Report: News for The Home Office Answering Machines Marketing: Essentials for Success 38 Hardware & Software Reviews

Home Office COMPUTING

August 1989 \$2.95 Canadian \$3.25

The New Breed of 286 Computers





The Tandy® 1000

Runaway bestseller.

Whether you're writing a novel or a business proposal, you need to separate the facts from the fiction when it comes to word processing.

Fact is, the Tandy 1000 is the best-selling PC compatible in America. With good reason.

The Tandy 1000 comes with DeskMate software for word processing, filing—even graphics. So you can compose, edit, revise and polish your work as you see fit.

A built-in graphical user interface frees you from learning confusing computer jargon.

The Tandy 1000 will even proofread for spelling errors.

For more power, check out our line of business systems.

Because to writers everywhere, Tandy is a word to the wise.

Radio Shack The Technology Store

A DIVISION OF TANDY CORPORATION
CIRCLE READER SERVICE 52



COVER STORY

The New Breed of 286 Computers

Page 41

This year's 80286-based personal computers offer the home-office buyer the best performance for the price. Here, HOME-OFFICE COMPUTING reviews four of the best newbreed AT compatibles. *Plus:* A comparison chart of seven 286-based PCs.

HOW TO

Finding the Right Marketing Mix

Page 37

Marketing is the main ingredient in any successful business. Learn how to combine the four P's—product, place, price, and promotion—to cook up your own marketing menu.

SOFTWARE

Grow Your Business with a Professional Identity

Page 45

Every piece of paper that leaves your office—forms, fliers, brochures, advertisements, newsletters—communicates a message to your clients. We'll show you how to maximize the impact of your materials with desktop-publishing software.

PROFILE

Gambling Expert Hits a Different Kind of Jackpot

Page 50

There's no luck involved in the success of Las Vegas gambling instructor Sam Micco's home business. Trade-show exposure in this top convention town is helping his promotional-products firm take off.

0 & A

Guide to Floppies

Page 52

This question-and-answer guide to the flexible mylar disk takes you into the nuts and bolts of 3.5- and 5.25-inch floppy disks and offers tips on caring for them.

BUYER'S GUIDE

The Best Answering Machines for Doing Business

Page 55

Here, HOME-OFFICE COMPUTING compiles a shopping guide to state-of-the-art answering machines. *Plus:* Comparison charts of 18 answering machines as well as 14 integrated answering machines.

PRODUCTS

Hardware Reviews

Page 60

Computer: AST Premium/386 C Model 390. Printer: Hewlett-Packard's DeskJet Plus Copier: Mita's CC-20. Fax Machine: The Relisys Tefax Model RA2110P. Cordless Telephone: Cobra Intenna Model CP-480.

Office Essentials Page 64

Information on the latest office products, services, and gadgets. *This month*: Surge protectors, a set of three-by-five command reference cards, a sleek disk valet, and more.

Software Reviews Page 66

Long reviews of *QuarkStyle*, a desktop-publishing template program; *Total Word*, Volkswriter's new word processor; *Drawing Table*, a powerful CAD package; and *IZE*, a unique database. Capsule reviews of *Acta Advantage*, *Disk Technician Advanced*, *The Norton Utilities/Advanced Edition*, and *TaxView Planner 1988–1992*.

FAMILY COMPUTING

Can You Read This Article in One Minute or Less?

Page 73

Do you or your child want to increase reading speed while maintaining a high level of comprehension? Each of the three software packages reviewed here takes a slightly different tack to deliver quick results.

Software for Learning and Leisure

Page 76

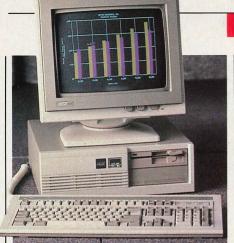
Education: A review of WellAware: Food Sensitivity, a personal allergy-analysis and reaction-logging program. Capsule reviews of Mount Murdoch: Large Character Adventure System, The Election of 1912, and Zoyon Patrol.

Entertainment: Long reviews of *Presumed Guilty!* and *Might and Magic II*. Capsule reviews of *Paladin*, *Search for the Titanic*, *Dr. Doom's Revenge*, *Hostage*, and *Turbo Champions*.

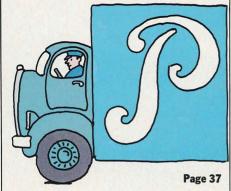
Entertainment News and Hints

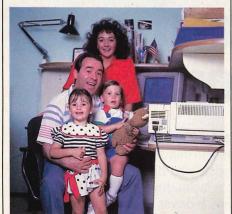
Page 79

The inside scoop on upcoming Star Trek games, a cartoon-style circus package, a time-travel adventure, a motorcycle role-playing game, and more. *Plus*: Hints for *Neuromancer* and *Times of Lore*.



Page 41







COVER PHOTOGRAPH BY CHRISTOPHER GOULD



Preserve the fruits of your labor.

Your computer contains valuable information that demands protection—client files, sales records, inventory lists, financial records, graphics files. You can preserve your vital data by creating your own personal archive. The Archive tape backup system is your solution.

Archive tape drives are easy to add on and are fully compatible with your IBM PC, XT, AT, and compatibles, as well as all models of the IBM PS/2 family.

Both 3.5- and 5.25-inch drives can be installed directly in your computer cabinet. Or simply connect our free-standing, self-contained external unit. Whether you're saving 20 megabytes or 200, Archive can preserve your data in minutes.

You can even schedule your drive to back up automatically, thanks to our menu-driven QICstream software.

And with over 1 million drives shipped, our leader-

ship position is unequalled in the industry. Archive provides you with the lowest cost, and most reliable, advanced products on the market today.

Preserve the fruits of your labor. Call now: **1-800-237-4929** for the Archive dealer nearest you.

And tell them you want the Archive Tape Backup Solution.



ARCHIVE CORPORATION

CONTENTS TWO



Page 20



Page 24



Page 28

ADVISORY BOARD

Lynie Arden, editor, Worksteader News; Paul & Sarah Edwards, authors and sysops of Compu-Serve's Working from Home Forum; Lis Fleming, director, Association of Electronic Cottagers; Charles H. Gajeway, assistant vice president, Merrill Lynch; Gil Gordon, editor, The Telecommuting Review; Tom Miller, director, ESU Telework Group (a division of Link Resources); Joanne H. Pratt, Joanne H. Pratt Associates, independent consultant.

HOME-OFFICE COMPUTING (ISSN 0899-7373) is published monthly by Scholastic Inc., 730 Broadway, New York, NY 10003. Subscriptions: in U.S., 12 issues for \$19.97. Canadian and U.S. possessions add \$6.00 per year for postage; foreign residents add \$8.00 per year. Printed in U.S.A. Copyright © 1989 by Scholastic Inc. All rights reserved.

POSTMASTER: Send address changes and notice of undelivered copies to HOME-OFFICE COMPUTING. P. O. Box 53561. Boulder, CO 80322-3561. Known office of publication, Scholastic, Inc., 351 Garver Rd., Box 2700. Monroe, OH 45050-2700. Second-class postage paid at Monroe, OH 45050-9998 and additional offices:

HOME-OFFICE COMPUTING is a trademark of Scholastic, Inc. and FAMILY & HOME-OFFICE COMPUTING and FAMILY COMPUTING are registered trademarks of Scholastic Inc., 730 Broadway, New York, NY 10003.

COLUMNS

Shoptalk Page 12

Creating a Business Plan for Your Specialized Business. Home-business consultant Joanne Pratt gives advice on preparing business plans, adding employees when you're ready to branch out, and evaluating competition before starting a mail-order business.

Clinic Page 14

Answers to Your Computing Questions. HOME-OFFICE COMPUTING's technical staff answers readers' computing questions on the hardware limitations of laptops and file translation. Plus: How a HOME-OFFICE COMPUTING editor saved the day.

Machine Specifics Page 16

Improved HP Wares, Microsoft Word 4.0, Tending Your Apple. Hardware and software news, opinions, quotes, and rumors reported by HOME-OFFICE COMPUTING's insider columnists on the IBM/MS-DOS, Macintosh, and Apple II universes.

Working Smarter Page 34

10 Ways to Give Your Home Business a Corporate Image. In many business situations, appearance is everything. Columnists Paul and Sarah Edwards present 10 easy tips to help you put your best foot forward for clients and customers.

Workstyles Page 88

Neighborhood Fax and Dime. Being the first on your block to have a fax machine can make you popular. As neighbors line up to use his fax machine, our telecommuting senior editor Nick Sullivan examines the impact that facsimile technology has had on his small community.

DEPARTMENTS

Editor's Note Page 4

Letters Page 6

Up Front Page 8

News, advice, tips, and a shot of humor on computing, using home-office technology, and running a home business. *This month:* CES Special—What's new in consumer electronics.

Word Processing Page 20

Make Word Processing Easier with Macros and Menus. Soup up your word processing with three WordPerfect keyboard-macro add-on products.

Spreadsheets Page 22

Full Impact for Full Reports. Ashton-Tate's Full Impact combines powerful data analysis with extensive word processing and graphing capabilities to spawn a whole new generation of Macintosh spreadsheets.

Databases Page 24

Get at Information Quickly with Reference File. Reference File, an elegant memoryresident database manager, offers you sophisticated features in an easily accessible pop-up package.

Finance Page 28

Quicken vs. Checkwrite Plus. Two popular check-writing packages, Quicken and Checkwrite Plus, each offer the home-based businessperson a simple and effective way to automate personal and business bookkeeping.

Telecomputing Page 30

Why I Traded Up to a 2400-bps Modem. Speed and dropping prices have made 2400-bps modems a more attractive telecommunications option than ever.

Business 101 Page 32

Promoting Your Business on a Tight Budget. You don't have to invest in sandwich boards and megaphones to promote your home business. Here are eight quick tips on the fine art of penny-pinching promotion.

Home-Office Shopper/Classifieds

Page 82

Advertiser Index

Page 87

I Thought This Was a Service Economy—So Where's the Service?

One of the reasons cited for the recent dramatic growth of the home office and the rise of the independent entrepreneur is the shift from a goods to a service economy. Of course what is meant is that with fewer businesses now conducted in factories and with information and services now our leading products, location diminishes as an issue. So, we come to the home as a natural place to stay and work.

I see another link between service and small-scale, budding businesses. I see opportunity—the opportunity to provide quality service that is so often lacking in the larger companies.

Where, I ask, is the decent service in this service economy? Let me vent some of my frustrations on this subject.

During the last few months, I've traveled more than usual and accumulated a list of complaints about the service I encountered. Fortunately for me and for some of the companies I deal with, exemplary, thoughtful employees have saved the day on occasion. But that is not the rule.

For example, I've been using (and recommending) a particular car service to take me to the New York area airports for many years. I have watched the company grow to the point where it now has an 800 number and a seemingly vast stable full of cars and drivers.

I appreciated the convenience of having a car call for me instead of going to the corner and fighting for a cab. This past Memorial Day, however, the service called to say there would be no car. (On a recent Christmas holiday I never even got a call!) I was promised a discount on my next trip, but at the moment of truth, neither the dispatcher nor the driver was willing to deliver. I will no longer contribute to this company's growth, and I am now giving their competitors a go at my business. I do so reluctantly, but I can't encourage poor service by accepting it. I hope to find a company that better values its customers.

I believe that, like me, millions of disgruntled consumers and companies are eager to be wooed and won over by small suppliers and companies that will serve them well.

Next case: I've felt strong emotional ties to American Airlines since I moved from Detroit to New York. (They've since abandoned that route, to my dismay.) For years they



carried me between my original and adopted Last month, I made two last-minute trips to Los Angeles on full-price tickets (about \$1,000). Not only did I have to endure annoying seatmates incessantly bragging about their deeply discounted fares, but I was even unable to get a blanket on any of these flights. And on a recent flight to Chicago, for the Consumer Electronics Show (see page 12), delayed because of weather, the only announcement asked passengers to remain calm and seated "for the sake of the crew." What about the customers? My seatmates, worried about connecting flights, rang their call buttons for 20 minutes, to no avail, while watching several stewardesses talking farther up the aisle.

A thoughtful stewardess on one flight and a helpful ticket agent who let me switch to an earlier flight on a non-refundable ticket kept me as a customer for the airline. Rude and inconsiderate ticket agents for Northwest Airlines, both in New York and Seattle, however, have convinced me to fly that airline only as a last resort.

The point of all this is that large companies cannot easily monitor the service delivered to their customers. And not enough companies make good service a priority. Opportunities abound for independent businesses to grow their companies based on a policy of quality product and outstanding service. Most of us consumers long to be satisfied customers. Don't you?

Clausia Core

CLAUDIA COHL, EDITOR-IN-CHIEF

Home Office

PRINTED IN THE U.S.A. 730 Broadway, New York, NY 10003 (212) 505-3580

EDITOR-IN-CHIEF: Claudia Cohl DESIGN DIRECTOR: Vincent Ceci

EDITORIAL

EXECUTIVE EDITOR: Bernadette Grey
SENIOR EDITORS: David Hallerman, Nick Sullivan
MANAGING EDITOR: Michael D. Espindle
ASSOCIATE EDITOR: Karen Kane
COPY EDITOR: Lauren Leon
RESEARCHER: Brianna Politzer

EDITORIAL COORDINATOR: Michelle Wright
CONTRIBUTING EDITORS: Lynie Arden, Henry Beechhold,
Paul & Sarah Edwards, Lis Fleming,
Charles H. Gajeway, Ronnie Gunnerson, Roger Hart,

Charles H. Gajeway, Ronnie Gunnerson, Roger Hart, Stephen Miller, Steve Morgenstern, Charlotte Pierce, Joanne H. Pratt. Barbara Stein

ART

DESIGN ASSOCIATE: Drew Hires

DESIGN ASSISTANTS:

Doreen Maddox, Susan Taylor, Kate Panzer

TECHNICAL

TECHNICAL DIRECTOR: Lance Paavola

MANAGING TECHNICAL EDITOR: Steven C.M. Chen

ASSOCIATE TECHNICAL EDITOR: Marie Alvich

ASSISTANT TECHNICAL EDITOR: Jeff Donahue

PUBLISHING

PUBLISHER: Richard Robinson
CONTROLLER: Ray Marchuk
PRODUCTION MANAGER: David J. Lange
CIRCULATION DIRECTOR: Karen Williams
CIRCULATION MANAGER: Michael Sheehy
CIRCULATION PROMOTION MANAGER: Patricia Neal
CIRCULATION ANALYST: ROCCO MOrabito
CIRCULATION ASSISTANT: Andrea Fullwood
ASSISTANT BUSINESS MANAGER: Kevin Smith

ADVERTISING SALES OFFICES

ASSOCIATE PUBLISHER:
Paul W. Reiss (212) 505-3585
NEW YORK METRO DISTRICT MANAGER:
Jonathan Wolpert (212) 505-3628
SOUTHEASTERN DISTRICT MANAGER:
Susan Pienkos (212) 505-3588
NEW ENGLAND DISTRICT MANAGER:
Alicia Wisepart (212) 505-3587
MIDWESTERN DISTRICT MANAGER:
SHATON R. O'Brien (312) 467-6888

SOUTHWESTERN DISTRICT MANAGER: Margaret Bonomo (312) 467-6888 400 N. Michigan Ave., Suite 1104 Chicago, IL 60611

WESTERN SALES MANAGER: Ed Callahan (213) 827-9183 SOUTHERN CALIFORNIA DISTRICT MANAGER: Pamela Taylor 4640 Admiralty Way, #417

Marina Del Rey, CA 90291 (213) 827-9183

CALIFORNIA DISTRICT MANAGERS: Pauline Sly, Ken Stratton 1 Waters Park Drive, #225 San Mateo, CA 94403 (415) 571-0487

DETROIT REPRESENTATIVE: Keith Olson/Media (313) 642-2885

MANAGER, ADVERTISING PROMOTION: Theresa Mazza (212) 505-3586 ADVERTISING SERVICES COORDINATOR:

Margaret Helene (212) 505-3630

SALES ASSISTANT: Karen Frumkin (212) 505-3688

TELEMARKETING DIRECTOR:

Greg Rapport (212) 979-0728

NEED SUBSCRIPTION ASSISTANCE?

Please send change of address to HOME-OFFICE COMPUTING, P.O. Box 2511, Boulder, CO 80302. For other subscription problems, please write to HOME-OFFICE COMPUTING, 740 Broadway, New York, NY 10003. Attn: Customer Service.



Each MacInker shipped complete with free bottle of ink, reservoir cover & ink meter/dispenser \$68.50



Universal Cartridge MacInker68.50 Universal Spool MacInker68.50 Epson(s) only MacInker.....42.00 Imagewr. I/II only MacInker.....42.00 Multicolor Adapter(s)40.00 Ink bottle...3.00 pint18.50 **pint18.50** Shipping4.50

MacInker™, the famous automatic ribbon reinker. The Universal MacInker re-inks hundreds of different cartridges with suitable adapters. Our proprietary, extra dark, lubricated ink yields better than new printout and its cooling effect extends printhead life. Many Customers use MacInker on brand new cartridges to enhance print crispness. Use MacInker also to re-ink in 10 different colors, or to re-ink heat transfer cartridges for cloth, T-shirt printing. Operation is very simple and automatic on all models. Optional multicolor adapters re-ink 4 color cartridges. Our Customers range from individuals to Fortune 500 Corporations who have documented savings of up to \$40,000/year! We have a full range of optional accessories, inks & cartridges in all colors. We pioneered re-inking technology in 1982 and are dedicated to its develop ment. Ask for free catalog.

Special Offer. Buy the Univ. Spool MacInker with any other MacInker & pay only \$50.00 (for the spool unit). Order for >\$60.00 and say "I saw it in Home Office Computing" and get a free mousepad. Order for >\$100.00 and get free key-beeper with flashlight combined (a \$15 value), or get a guaranteed, accurate, LCD electronic pedometer, jogging & step meter & calculator for only \$15.00 (a \$40 value).

LightFax 9624 FaxModem

\$749.00

office into a state of the world communication center!

9600 baud fax and 2400 fully Hayes compatible modem in one. Full front panel control lights. Software features Background operation, NameCard data management, Scheduled Sending, Broadcasting, full input/output Journal and much more. Optional 200 dpi scanner or 400 dpi scanner for direct input into fax window or favorite paint program. Ask for bulletin "Facts on faxes".

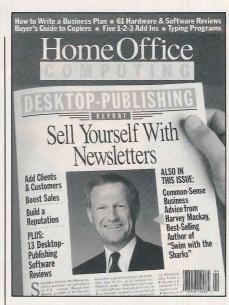
LightFax 9624749.00 Lightfax 9624 . LightScan 200 dpi ...199.00

Internal FaxCard......699.00 LightScan 200 dpi .199.00 (includes ext. scanner interface) LightScan 400 dpi ...373.00 Optional PCSoftware ..200.00 Modems, Data Switches, Buffers....please inquire

Satisfaction or return on all products Major credit cards. Prompt shipment Order Toll Free 1-800-547-3303 In Oregon (503)626-2291- fax (503)643-5379

Computer Friends, Inc. 14250 NW Science Park Dr., Portland OR 97229

LETTERS



NEWS FIT TO PRINT

I picked up the April issue of HOME-OFFICE COMPUTING because of the cover story, "Sell Yourself-With a Newsletter!" (page 37). As one who publishes a newsletter to promote her business, I was stunned by the insightfulness of the article.

Also, I just subscribed—but only after recommending your publication to two of my clients.

Thanks for a job well done.

MARYANN McCOURT MAINSTAY BUSINESS SERVICES, INC. Pembroke, Massachusetts

Thank you for the informative article on newsletters in your April issue. One comment: You didn't post an address for readers who want to subscribe to the newsletters you profiled.

I'm mainly interested in The Paxton Report. Can you help?

> JOSEPH ALBANESE New York, New York

EDITOR'S REPLY: Readers who want more information on the newsletters profiled in our April issue can contact the following organizations:

The Paxton Report Mailbox Music P.O. Box 341 Rye, NY 10580

The Computer Literacy Newsletter The Computer Literacy Workshop 4710 Bellaire, Suite 340 Bellaire, TX 77401 Attention: M. Luellen, Editor

Teaching for Learning: The Newsletter for Fiber Arts Teaching 511 Hahaione Street, #18-C Honolulu, HI 96825

Computer Law Letter LLM 150 Broadway, Suite 610 New York, NY 10038

SULLIVAN SUPPORTERS

Bravo! I love Nick Sullivan's Workstyles column. I seem to have standard read-thisfirst favorites for most publications, and his column is one of them. When InfoWorld arrives, I look for Robert Cringely. Page B1 is my first stop on The Wall Street Journal. When HOME-OFFICE COMPUTING shows up, I turn to Workstyles.

In addition to some growing computer consulting work, I am currently a systems administrator for Detroit Art Service, a technical-documentation producer for the automotive industry. I particularly enjoy writing training material for computer users and am often asked if I know of any computer magazines that a new user can understand. I find myself directing new users to your publication.

> IRENE ONDERCHANIN Rochester Hills, Michigan

I am most appreciative of humor and was somewhat surprised, as I am a new subscriber, to find humor in more than one article and product review. Nick Sullivan's "The Squeaky Fax Gets the Grease" (April, page 96) really had me slapping the old knee!

LINDA E. JONES Jacksonville, Florida

ON TARGET

I have been receiving HOME-OFFICE COM-PUTING for about a year and find it a pleasure to read. In your April Hardware Reviews, Stephen Miller's review of the Bell South 2000 was right on target ("Call a Name, Not a Number," page 66). I purchased the phone for my home office. I have other phones; however, I find this one outstanding. I agree with you on the speakerphone feature—many of my customers have remarked that they didn't know I was calling from a speakerphone when I talked to them.

TED SAMPSON TEDDYBEAR SERVICES Roxborough, Pennsylvania

HOME-OFFICE COMPUTING looks forward to letters from all readers. Please direct correspondence to Letters to the Editor, HOME-OFFICE COMPUTING, 730 Broadway, New York, NY 10003. Include name, address, and telephone number. Letters become the property of HOME-OFFICE COM-PUTING and may be edited for length and clarity.



JUST SEVEN OF THE BRILLIANT FEATURES **OUR NEW 300 CPS PRINT**

to interrupt a long continuous paper project to do a quick page

INTRODUCING THE CITIZEN™ HSP SERIES PRINTERS. YOU'LL LIKE THE COLOR.

As your business and your business applications grow, we intend to grow with you. So we offer things like color adaptability. Thanks to a single snap-in cartridge with all the brilliant colors you see here.

You might not need it now. But years ago, most people would've thought their black and white TVs were just fine, too. Imagine back then being able to convert to a color set so easily.

And with that, you can begin to imagine all the clever, problemsolving features that make our hard-working HSP simply the most advanced printer of its kind. Ever.

YOU'LL LOVE THE PAPER HANDLING.

Say one day things get so busy that you need

press a button to "park" the first job's paper out of the way, insert vour letterhead

HSP features paper parking. Just

of letterhead or a pre-printed form.

No problem. Because the

or form, and go. When you're done, another touch moves the continuous paper back and you pick up right positions for tear off. where you left off.

The HSP is also faster and easier when it comes to loading paper, letterhead, or forms. In fact. whatever paper you choose. Thanks to a push-pull tractor with

rear and bottom feeds.

WHY FASTER IS BETTER.

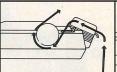
Not to gloat, but our throughput is among the top 10% in the business. With print quality that's the envy of even 24-wire printers.

And because the HSP accepts information more quickly, work gets done on time. Which will

be especially important when there are several jobs vying for kevboard time.

GUARANTEED PRACTICALLY FOREVER.

Perhaps best of all, we intend to keep its smart functions functioning. So the HSP comes with a 24-month warranty.

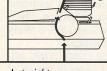


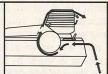
Our push tractor positions and prints

the first check or

letter every time.

Then automatically





A straight paper path makes labels more likely to end up stuck where you want them rather than stuck to the

Big piles of complicated sprocketfed forms are no problem. The HSP will print within boxes and hit every line with amazing accuracy.

Twice as long as most of our competitors.

Yet these are only a handful of the two hundred-plus improvements the HSP has over its predecessors. All designed with a long and productive future in mind.

For the Citizen Printer Dealer nearest you, call 1-800-556-1234, Ext. 34. In California, call 1-800-441-2345, Ext. 34.

The new Citizen HSP Series. It's a workhorse of a different color.

© 1989 Citizen America Corporation. Citizen and the Citizen



A Look into an Electronic Crystal Ball

Many would argue that the Ringling Brothers and Barnum & Bailey Circus is the greatest show on earth, but the International Summer Consumer Electronics Show, better known as CES, gives the circus a run for its money. Just ask anyone in the consumer electronics business.

Twice a year, electronics manufacturers, retailers, buyers, and press representatives gather to find out what's happening in the world of television, home-office equipment, stereos, software, and home automation. The 40th CES, held in June, drew 57,446 people to Chicago to see more than 1,300 exhibits.

While manufacturers performed skits, gave away goodies, and proudly announced their latest wares, retailers roamed through elaborate display booths eyeing the latest technologies. The noise level would have drowned out the roar of a lion.

The show gave HOME-OFFICE COMPUT-ING editors an inside look at what's to come. And if we get to look into a crystal ball, you should too. After all, as buyers of electronic office equipment, you need to stay informed about products that are on the horizon. Much of what was shown at the June CES is likely to appear in stores by Christmas.

So three HOME-OFFICE COMPUTING editors covered 13 miles of aisles in search of the new and the significant. What we found was more manufacturers targeting the homeoffice market with exciting new products designed and marketed especially for home use. Fax machines have a growing list of new features and lower price tags. Physical dimensions of all product categories are shrinking. And home automation is moving out of science fiction and into reality.



More than 50,000 people attended the June Consumer Electronics Show in Chicago.

Manufacturers Capitalize on _x Appeal

What word has three letters, ends with an X, and is a hot topic of conversation at cocktail parties and business lunches? Fax, of course. And at CES, everyone was talking about—and showing—fax machines. Manufacturers are predicting that 1990 will be the Year of the Fax. Dozens of new models were introduced, offering more features for less money. Here are the most promising new desktop units seen at the show:

- Leader-of-the-pack Murata introduced the first under-\$900 fax machine (the M900) to incorporate an automatic multipage document feeder. Also from Murata: the M1800, M1750, and M1400-three new fax machines with built-in voice/data switches and telephone ports for answering machines or second telephones. Prices are not yet
- Epson America, best known for its printers, entered the fax-machine market with the

PriorityFax 1000, 2000, and 3000. All three units come with five-page document feeders, paper cutters, and telephones. Prices range from \$1,399 to \$1,899.

• Panasonic is going after the home-office market with two units that come with answering machines and remote control. The KX-F120 (\$1,695) and KX-F100 (\$1,495)



Prices for fax machines are coming down. The new Murata M900 will sell for under \$900.

have voice/data switching and five-page automatic document feeders.

- Toshiba exhibited a machine with a builtin answering machine, automatic document feeder, and fax/voice switch. The 11.4pound Model 3600 has a suggested retail price of \$1,695. The company's new \$1,995 Model 3700 doesn't have an answering machine but does include a paper cutter.
- Sharp introduced one new fax machine, the UX-100, which comes with an automatic document feeder and costs \$1,300.
- Ricoh expanded its fax offerings with three new machines ranging from \$1,595 to \$2,295. All come with automatic document feeders, but only the RF920 has a paper
- Brother presented three new fax machines featuring automatic document feeders and paper cutters. We hear that the FAX-200, FAX-210, and FAX-220 will each carry a suggested retail price of less than \$1,000.

MEMORYMATE: THE LAST THING YOU NEED TO REMEMBER!

What's MemoryMate? It's a unique software program: a free-form data manager that lets you enter information in your own words-totally unstructured. And retrieve it the same way. Instantly.

No need to designate a key word or remember how you filed something. Whenever you need the information again, just pick any word in the entry. And bingo, there it is. Because every single word vou enter is automatically indexed. And cross-indexed!

> It's 9 A.M. Do you know where your meeting is?



It happens to everybody. Even people who keep accurate notes don't always know where they keep them.

In fact, most of us are so busy that important phone numbers can end up scribbled on matchbook covers, crumpled envelopes or pay stubs. And the one thing we forgot to put in the briefcase last night is the list of things to do this morning.

Well, if you use an IBM® PC or compatible, we have good news for you.

Not only will MemoryMate organize all your random information for you, it will also automatically remind you each day of what's on your agenda and who you're supposed to call.

We're getting people out of sticky situations.

You know those little yellow sticky notes? They're great for putting reminders right



where they should be. But then they get buried, along with the rest of your important notes, lurking in ominous piles all over vour desk. Sound familiar?

MemoryMate is going to change all that. Let's look at an example.

The truth about executive search.



Suppose you're in the landscaping business and a developer calls you for a bid. He's building three huge hotels in Hawaii. When his permits come through, he wants you to plant several hundred palm trees. Great work if you can get it!

Now it's time to follow up, but you can't remember the guy's name. Fortunately you wrote everything down in MemoryMate. As quickly as you can type "Hawaii"—or any other word in your notes-MemoryMate will search its entire contents until the record you want appears on the screen.

No searching through your glove compartment, your trash can, your files or even the back of your mind: The information you need is right where you need it. Whenever you need it.

The biggest breakthrough in personal productivity in recent memory.

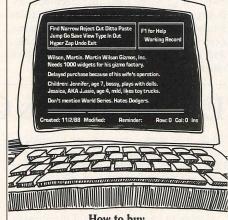
Now that you know how much you need MemoryMate, let's get specific about what makes it so helpful. MemoryMate is:

- Fast, Searches at 100K/second.
- Convenient, Memory resident or stand alone.
- Flexible. Supports multiple databases, Hypertext and EMS.
- Powerful. File size up to 32MB, limited only by your disk size.
- Generous. Needs only 88K of RAM.
- Instructional. Comes with free informational databases, including DOS help.
- Easy. 17 commands manage everything and they're always onscreen.
- Available in 5¼" and 3½" disks. Requires IBM PC/Tandy® or compatible. PC DOS 2.0/MS® DOS 2.0 or later. 256K recommended. Requires 88K of RAM (33K with EMS.) Not copy protected.

Satisfaction guaranteed . . . or your money back!

If you order direct from Brøderbund and are not 100% satisfied, for any reason, return the complete package and contents within 10 days to the address below, with your invoice, and we'll promptly refund your full purchase price.

- "A wonder (and) a bargain." InfoWorld
- "You'll wonder how you ever got by without it." PC Week
- "Lightning fast" Syndicated columnist Bob Schwabach
- "A new masterpiece . . . five gold stars" BYTE



How to buy.

Visit your local software retailer, or call 800-521-6263 between 8AM and 5PM.

Pacific Time, for creditcard orders or orderby-mail details.



MEMORYMATE.

Send me MemoryMate for \$69.95 plus \$3.50 shipping. CA res. add 6% sales tax

MUSE COSTS SAN	THE RESIDENCE	A SECTION AND	
NAME	al July Tan		De h
ADDRESS		7.17.10	
CITY	STATE	ZIP	ET BILL
DAYTIME TELEPHONE (RE	OURED FOR CREDIT CAR	D ORDERS)	

☐ Check/Money Order ☐ Visa ☐ MasterCard ☐ American Express ACCOUNT NUMBER

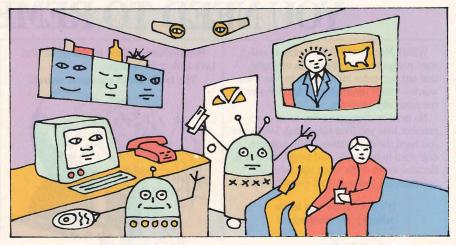
EXPIRATION DATE SIGNATURE Order by phone 8 a.m. - 5 p.m. PT

P.O. Box 12947, San Rafael, CA 94913-2947 Allow 4 weeks for delivery.

Homes of Tomorrow Are Almost Here

Since the 1964 World's Fair in New York, Americans have been waiting for homes with brains. You know, the kind that cook dinner while you attend business meetings, recognize your voice at the front door, keep an "eye" on the kids, and automatically adjust the thermostat and lights. In the 1990s, these houses might finally arrive.

Electronics manufacturers have joined forces and developed a "central nervous system for homes" capable of interconnecting a broad range of consumer electronics products, appliances, air conditioning and heating systems, home security devices, and computers. This home-automation standard, called CEBus, is supported by such heavyweights as Tandy, Sony, AT&T, and Mitsubishi. At CES, the consumer electronics industry demonstrated the emerging CEBus hardware standard and showed off a generation of "smart" audio, video, computer, and telephone products that talk to each other.



The exhibit demonstrated how you can program your alarm clock to start your coffee pot, and how your coffee pot can then tell your personal computer to print out the daily highlights from an electronic news service. We also saw how to turn on the air conditioner or start dinner cooking with a quick call from the car phone. Let's hope the dinner pill (Jetson-style) is still a long way off.

Emerson Enters Computer Market

While most new computers are unveiled at the Computer Dealers Exposition, or COM-DEX, a few notable introductions were made at CES. The most surprising new entries came from Emerson, a company best known for its radios.

Hoping to capture a chunk of the growing home-office market, Emerson introduced a complete line of computer products, including 80386SX-, 80286-, and 8088-based machines. The computers, which should be available in stores this month, will cost anywhere from \$995 to more than \$3,000.

Blue Chip International displayed its powerful Precision 386 series of computers, which will start at about \$4,000, and its ATcompatible Preference 286 (\$2,000 to \$2,500). Both Epson America Inc., the king of dot-matrix printers, and Amstrad Inc. also displayed new \$2,000 AT-compatibles. Epson's Apex 200, Amstrad's PC2800, and Blue Chip's Preference 286 will be targeted to home users looking for power without the price.



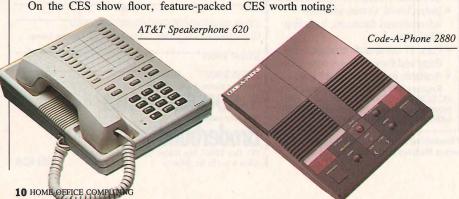
Emerson, Epson, and Blue Chip have announced new computers geared for the home office. The Emerson 8386EC will sell for \$2,000.

Telephones II: The Next Generation

What's the one category of electronics equipment used in every home office? The telephone. It's no surprise then that the home-office market has captured the attention of telephone and answering-machine manufacturers.

telephones were the rage. We had to look hard to find a phone without two lines, memory, or a hold button—or an answering machine that didn't include a telephone or a time/date-stamp feature.

There were several announcements at



- AT&T is tackling static with a new cordless telephone incorporating Clarity Plus, a technology that promises to eliminate interference. AT&T also introduced the \$80 Speakerphone 620, which blocks out background noise.
- The Model 2880 answering machine displayed at the Code-A-Phone booth offers a "message director," which records incoming messages on different tapes, based on the nature of the call—business or personal, for instance. This machine also lets the owner leave private announcements for specific callers.
- At the Cobra and PacTel booths, we found cordless telephones with speakerphones and dial pads on the recharging bases as well as on the handsets. They actually give you two phones in one.

What's Big? What's Small

The Incredible Shrinking Machines

The novelty store Think Big has built a business by exaggerating the size of every-day objects like pencils and paper clips. But in the world of consumer electronics, less is more, and manufacturers make a lot more money thinking small.

At CES, the hottest items for the home office were also the smallest. The most ubiquitous little devices were the hand-held computers and personal organizers, but fax machines, modems, copiers, and disks are all getting small. The benefit to businesspeople? Portability.

Here's a summary of the newest products. In the palm of your hand. Many hand-held devices-like the Sharp Wizard, Psion Organiser, and Casio Boss-are designed for tracking appointments, maintaining telephone numbers and addresses, and organizing the traveling professional. Although these useful gadgets now allow you to exchange data with your computer, only one, the new Atari Portfolio, is MS-DOS compatible. The \$399 mini computer comes with 128K, a spreadsheet, word processor, appointment calendar, phone directory, and an autodial feature, yet weighs less than a pound and is about the size of a videotape. Its eight-line LCD screen and 63-key QWERTY keyboard resemble those of units many times its size and price. When available (early next year), it will actually be able to copy and run programs used on your desktop computer.

A new hand-held personal organizer, AgendA from the British company Microwriter Systems, distinguishes itself with a new twist on keyboard input. In addition to an ABC-style keyboard, there are five buttons ergonomically positioned for the fingers of the right hand. Different combinations of buttons correspond to letters of the alphabet, and once these combinations are memorized, words can be entered nearly twice as fast as writing by hand. AgendA sells for about \$300.

Tele-Art Inc. introduced two devices that communicate with each other via infrared signals. The PD32K Pocket Memory is an electronic ''little black book'' that can transmit stored names, addresses, phone numbers, to-do lists, and other data to the larger PD64K Electrodex, which serves as a desktop Rolodex. That way you'll always have two up-to-date records—one to carry with you at all times, and one for your home office.

Cellular phones. The freedom to do the walking while you're talking is turning cellular phones—especially small ones—from novelties to necessities. The pricey Motor-

ola MicroTac (\$2,495), one of the smallest cellulars (5.5 inches by 2.25 inches), weighs only 12.3 ounces (with battery), and is small enough to fit in a suit-coat pocket. Other pocket-size cellular phones introduced at CES were Panasonic's Portable and Mitsubishi's Model 900. Prices were unavailable at press time.

Portable office products. If you are fixed on fax transmissions and feel the need to zip documents back and forth while on the road, Citizen and Panasonic have new portable models that fit in your briefcase. No price has been set for Citizen's smaller-than-a-bread-box FX-1000, which weighs 5.9 pounds. Panasonic's KX-F80 also has an answering machine. The unit will sell for \$1,095.

Ricoh displayed its version of the officein-a-briefcase, which centers around the



The Atari Portfolio packs 128K and MS-DOS compatibility into a pound.



Ricoh's office in a briefcase includes a copier, scanner, and fax machine.

three-pound MC50 copier (\$540). The \$510 IM-A scanner attachment weighs about a pound, and the IM-F50 facsimile machine adds two pounds and another \$540 to the package. With these handy portables, you can scan a four-by-six-inch document and fax it to a colleague who will receive a full-size printout.

The Buz, a minimodem small enough to slip in your pocket, was introduced by Bell-South Products. It works without battery power (getting its power from the phone lines) and is available in 1200-baud (\$120) and 2400-baud (\$190).

Two-inch disks. Fuji and Maxell have both announced two-inch floppy disks. According to Fuji, the disks will be used in the newest generation of laptop computers, which a number of manufacturers are expected to announce this summer. Maxell's disks are currently being used in video cameras.

Shortcut Software Saves Time and Aggravation

Now there's comic relief for stressed-out MS-DOS computer users who waste time searching for renegade files and sorting through disorganized directories. Orange Software, Inc., a relative newcomer to the industry, introduced six *Shortcuts* for the most common disk- and file-management tasks. The benefit of each package is illustrated on the box with comic-strip characters sweating over mismanaged files and then discovering the helpful *Shortcuts*.

Each Shortcut—File/Find, Word/Find, Lock/File, View/File, Pack/File, and Disk/Director—costs about \$25 and is so easy to use that no manual is included. You simply type Shortcut and follow a few menudriven commands. But if you do have a question, just dial the Shortcut Software toll-free support number.



Word/Find is just one of the time-saving Shortcuts from Orange Software.

Creating a Business Plan for Your Specialized Business

BY JOANNE PRATT



To incorporate or not to incorporate, that is the question. Accountants say that incorporation is an unnecessary expense for many small businesses, but a lawyer would probably tell you

that you should incorporate to protect yourself in the event of a lawsuit. If you operate a home-based business and want to get halfmillion-dollar contracts, incorporating is one way to establish your credibility. The letters *Inc* suggest to your prospects that you mean business. So add that to your list of pros and cons as you select the best legal structure for your firm. Watch for a feature on incorporating your business in the October issue.

Q. I have started a new business installing home-electronic equipment and teaching owners how to use it, and I haven't heard of anybody else doing what I am doing. (My press release is enclosed.) Everyone tells me I have to write a business plan, but how do I go about it when there seems to be nothing to pattern it after?

BARRY PYNE

High Tech Hook-up Service San Francisco, California

A. You have a good idea for a service: going to homes and teaching owners how to operate VCRs, TVs, answering machines, and more. I would welcome someone to correctly hook up the electronic systems in my home.

Take that good advice—write a business plan. It doesn't matter that you can't find a similar company's to base it on; like a résumé, a business plan should be personalized.

Your business plan should include a description of your company, an analysis of the market, an overview of the service you provide, a marketing-and-sales plan, a brief profile of yourself and any other principals in the company, and a detailed financial statement. For more details, see "Your Business Plan: Road Map to Success" in the April 1989 issue of HOME-OFFICE COMPUTING (page 49).

Charlotte Taylor's *The Entrepreneurial Workbook* (\$10; New American Library, 1985), which I mentioned in my May column, is an excellent guide to writing a busi-

ness plan. Two other resources that you can't beat for value are the U.S. Small Business Administration (S.B.A.) publications *The Business Plan for Homebased Business* (MP 11, \$1) and *Business Plan for Small Service Firms* (MP 15, \$.50). Send a check or money order to the S.B.A., P.O. Box 15434, Fort Worth, TX 76119.

Q. I have operated a home-based medicaltranscription service for nearly four years, grossing \$22,000 annually. I have the IBM/ Personal Typing System, a hard-disk drive, modem, and Wheelwriter printer. I would like to get out of transcribing and make more money.

My degree is in music, and I have learned about the real-estate market, day-care centers, medical terminology, the insurance industry, and legal work through my clients. I also have good writing, research, and organizational skills. Can you suggest some possible business ventures?

KATHY FERNEAU Urbandale, Iowa

A. If there is sufficient demand, you could expand your present business and increase your income by hiring employees. Then you would spend most of your time getting the work and managing a staff of transcriptionists instead of doing the transcribing yourself. They could work from their own home offices, but you would be responsible for ensuring high quality.

If you enjoy research, consider providing custom searches for some of the fields you mentioned: insurance, law, and medicine. Interview your clients—explore their research needs and ask where the information via modem from existing commercial databases or compile your own database from local records. Find out the types of research needed and the price your clients would be willing to pay. Then begin your new venture by offering custom research as an additional service to your present business. Gradually drop medical transcription as you shift to tasks you prefer.

Q. I am starting a home-based sawmill and lumber-drying business, producing top-quality red oak, pine, cherry, walnut, and a few other selected species. I am looking for information on starting the business and for ways to market the lumber. Do you think something like this would sell through mail order? GREG HENRY

Newbury Park, California

A. I turned to home-based architect and furniture builder Joel Sanders for his comments on your idea. He buys mail-order lumber from such well-established firms as Craftsman Wood Service in Illinois, Albert Constantine & Sons in New York, Woodworkers' Store in Minnesota, and Willard Brothers Woodcutters in New Jersey.

Sanders points out that cherry and walnut are Appalachian species and questions the economics of hauling logs across the country to dry them. Spruce, pine, and myrtle, which grow in the Western forests, may not be in high demand, and even if they are, the established mail-order firms will be tough to compete against.

Examine the magazines in which you would advertise. You'll learn who else is selling and about their products and prices. In short, you need to research whether or not there is a local demand for lumber that is not being met. If there is not, you may want to reconsider your business idea.

COMMENT

In your March 1989 column, Gerald Ford of North Charleston, South Carolina, asked, "I think there's an error in my credit rating; how can I correct it?" You should have pointed out that if he had applied for credit and been denied, he could obtain his credit report free, within 30 days of the denial, from the consumer credit rating firm the credit grantor used. Also, under the Fair Credit Reporting Act, consumers have the right to put on their credit report a statement of up to 100 words.

J. C. TRUSS

J. C.'s Financial Consulting Moreno Valley, California

SEND US YOUR HOME-OFFICE QUESTIONS

Send your questions on taxes, legal issues, developing a business plan, capitalizing, marketing and public relations, or any other business-related issues to Joanne H. Pratt, c/o ShopTalk, HOME-OFFICE COMPUTING, 730 Broadway, New York, NY 10003. Name, address, and telephone number must be included on all correspondence. Pratt is a nationally known researcher and consultant on the subject of home business.



Designed to deliver.

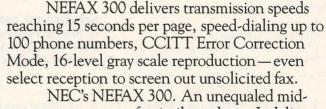
NEFAX 300. THE AFFORDABLE FACSIMILE WITH MEMORY BROADCASTING.

You can see the difference. The NEC NEFAX 300 introduces high-end advantages to mid-priced facsimile.

It delivers memory broadcasting—so you

can transmit up to 7 pages to as many as 20 locations without waiting to reload. All with a minimum of effort.

NEFAX 300 delivers papersmart performance—storing up to 7 pages in memory if your paper runs out. Automatic paper-cutting and a 10-sheet feeder are also standard.

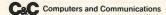


range facsimile package. It delivers more than your documents. It delivers you from attending to your facsimile when you'd rather be tending to your business.

Learn more about the technology and quality that come with every communications package from NEC. Call us at 1-800-STARFAX.







CLINIC

Home Office & Computer Products Catalog

FREE

Get your free copy of the Crutchfield Personal Office catalog and you'll find solutions to practically every small-office productivity need:



- Complete, performance-oriented computer systems and software.
- Add-ons and peripherals for IBM-compatibles and Macintosh.
- Components to upgrade your PC: memories, "speed-up" boards, hard and floppy drives, video cards, monitors and much more.
- Experienced Sales/Technical advisors who'll listen to your needs and recommend solutions.
- Step-by-step installation instructions and toll-free technical help let you complete most upgrades in less than 30 minutes and save hundreds of dollars.
- 30-Day Total Satisfaction Guarantee.

Plus, page after page of fully-described desktop office equipment, with exclusive comparison charts and magazine style editorials.

- Fax machines
- Electronic accessories
- Telephones & Answering machines
- Personal copiers Word processors

Call Toll-Free

1-800-521-4050

or write



Name	2-008-it value find	١.
Address	Apt. #	
City	State Zip	už ,-

Laptops and Bridges

EDITED BY JEFF DONAHUE

LAPTOP LIMITATIONS?

Q. Please tell me about the software and hardware limitations of a portable computer with a liquid-crystal-display (LCD) screen.

OWEN BEALL Flushing, New York

A. Surprisingly, just about all of the power and features of a desktop machine can be found in a laptop: high-capacity floppy-disk drives (3.5-inch only), large amounts of onboard memory, hard-disk drives, parallel and serial ports, and so on. As for software, any program that works on a desktop should work on a laptop as long as there's enough memory and it comes on 3.5-inch disks.

One of the most obvious drawbacks, in terms of hardware, is the limited availability of expansion slots. Most laptops have only one half-card slot designed for a modem card. Another disadvantage is that you must keep track of how much power is in the battery, so the power doesn't fail at a crucial moment.

Finally, LCDs do not have color capability, yet. Laptops simulate different colors by displaying varying intensities of the same color, usually gray or blue—a technique known as gray scaling. If color is a must for you, many laptops offer a port for connecting to a color monitor.

SPANNING THE GAP

Q. How can I transfer files from an IBM PS/2 Model 50Z with a 3.5-inch disk drive to an older IBM PC with a 5.25-inch disk drive?

> MEAGHAN SMITH Maplewood, New Jersey

A. A couple of well-known products can help you out. White Crane Systems's *Brooklyn Bridge* 2.0 (\$140; 6400 Atlantic Blvd., Suite 180, Norcross, GA 30071; [404] 446-0660) is a software-and-cable package that allows you to transfer files from one desktop

If you have technical questions or computer ailments that need diagnosis, our technical staff will try to help. Although we cannot answer each letter personally, this column will deal with frequently asked questions and common problems. We reserve the right to edit letters for length and clarity. Please include your name, address, and phone number with all correspondence. Send your letters to Clinic, HOME-OFFICE COMPUTING, 730 Broadway, New York, NY 10003.

computer to another desktop computer, a desktop to a laptop, and from a PC to a PS/2, via your computers' serial ports, at the impressive speed of 115,200 baud.

Similarly, LapLink III, from Traveling Software (\$140; 18702 North Creek Pkwy., Bothell, WA 98011; [206] 483-8088), comes with software and a universal (parallel and serial) cable, which enables you to transfer files between any two IBM compatibles. LapLink boasts a breezy installation—you can have your computers connected and exchanging data in minutes.

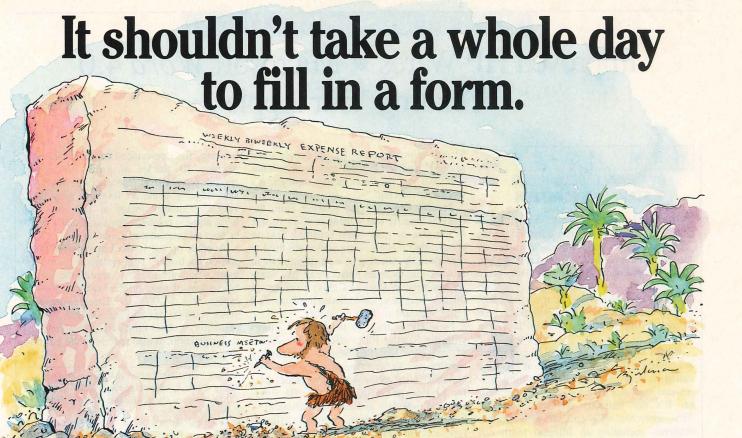
HOME-OFFICE COMPUTING SAVES THE DATA (AGAIN)

Not too long ago, I received an emergency call from a friend of mine who is an account executive at an advertising agency.

While working on a 286-based IBM compatible, my friend had saved a valuable word-processor document using a file name with a space as the first character of the extension. (Those of you familiar with MS-DOS know that this is an illegal character.) Subsequently, try as he might, my friend could not get the document to load back into his word processor; the software kept telling him the file had an illegal name.

By the time he called me, he was panicking. The first thing I did was duplicate his problem on my computer to help visualize it. Sure enough, even on a different word processor, I was able to create a file with an illegal extension and was unable to retrieve it. Next, I tried to call up the file from outside the word processor, but DOS also considered the file name illegal. I tried to rename the file—again, another error message. Then I decided to play my wild card.

A wild-card character in a computer system is similar to a wild card in a regular card game—it can hold different values. MS-DOS has two wild-card characters, the asterisk and the question mark. The subtle difference between the two proved to be the key to solving our problem. The asterisk can be used to represent a group of characters: For example, if you gave the command DIR MAY*, DOS would give you a directory of all the file names beginning with MAY. Unfortunately, the asterisk approach didn't help with our illegal character problem. However, the question-mark wild card can represent any single character. When we used the question mark as the first character of the file-name extension, I was able to call up the troublesome file, rename it, and then breathe a deep sigh of relief. -J.D.



Ever since people have been doing business, filling in forms has been time consuming and frustrating. Now, using FormWorx with Fill & File™, you can finally get your forms processing out of the stone age.

Quickly Fill In Standard Forms.

FormWorx with Fill & File makes it easy to fill in any standard government and industry form. After creating an on-screen version of your form, simply tab from blank to blank and type in your data. Correct any typos before printing and get letter-perfect results every time. Entries print precisely where they belong on your original form!

Some of the many powerful features: date, time and serial number stamps to minimize typing. Lookup tables to automatically fill in data. Read-only fields to prevent inadvertent changes. Autocopy fields to repeat data in different parts of a form. "Ditto" to repeat information from previous records. Fill & File will even perform extensive calculations automatically to eliminate the possibility of math errors.

Efficiently Create And Fill In Custom Forms, Too! FormWorx with Fill & File actually contains the latest version of FormWorx® the easiest forms designer available, so you can make and

fill in any form using just one package! There's no need to purchase a separate forms design tool.

Enter Information Only Once.

When you fill in a form, **Fill & File** simultaneously creates a standard database to store your information. **Fill & File** reads and writes dBASE® files *directly—without file conversion*. Different forms can be linked together. Your data can be selectively retrieved and automatically transferred to fill in other forms...*not* just the one originally filled in. Other features include: import/export ASCII and other file formats, long text fields up to 4,000 characters, multiple data files for relational capability, search and locate functions and batch printing. No need for all those cumbersome file cabinets cluttering your office!

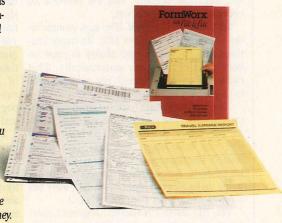
Now, Anyone Can Fill In Forms
On A PC. Special Offer! Purchase
FormWorx with Fill & File and get
EasyFill™, a \$49 value, Free upon
registration of software. EasyFill
is a unique programming tool that let's you
customize and automate the operation of
Fill & File with custom menus, help messages and automatic procedures. The
result—anyone on your staff can fill in
forms perfectly without having to learn the
software. It saves them time and you money.

Just A Stone's Throw Away. See your dealer immediately or call today for fast delivery! The entire package includes FormWorx with Fill & File software, complete documentation, over 70 sample forms and, for a limited time, EasyFill offer at no extra charge. At \$149, FormWorx with Fill & File is one software investment that's as solid as a rock.

800-992-0085 or 617-890-4499



Reservoir Place, 1601 Trapelo Road, Waltham, MA 02154



PostScript® support optional. 30-day money back guarantee on direct purchases. When ordering by mail, include \$6.75 for shipping in U.S. and Canada. Air mail to Europe/So. America—\$18. All other locations—\$28. In Mass. add 5% sales tax. Purchase orders are accepted from government agencies, institutions and rated corporations. Special EasyFill offer expires October 31, 1989. FormWorx is a registered trademark and FormWorx with Fill & File and EasyFill are trademarks of FormWorx Corporation. All other trademarks acknowledged.

MACHINE SPECIFICS

Improved HP Wares • Microsoft Word 4.0 Tending Your Apple.

BM/MS-DOS

BY HENRY F. BEECHHOLD & STEVE MORGENSTERN

According to unconfirmed reports, IBM is planning to give clone manufacturers a run for their money: Although certain models of the PS/2 line have been in short supply. Big Blue has reportedly made appreciable price cuts in a new, more "configurable" version of the popular Model 30 and the Model 50Z (60MB hard-disk drive). You should be able to pick up the new Model 30 for less than \$1,000.

80486 at the Door. The 80486 computers are coming. The 80486, or i486, as it is now called, is the best Intel chip so far for graphics and multitasking on a personal computer. It's not radically different from the 386—more like a top-end 386 with speedup features, including an integral math coprocessor. The first versions of the computers will be expensive (aren't they always?), but four-digit prices won't be far behind.

H.B. HP Days Are Here Again. Hewlett-Packard hardware has been a central feature of my computer setup for about two years now, and I have no complaints. My HP LaserJet Series II laser printer runs day in and day out, producing pages quickly and, most important, reliably. And my second HP acquisition, a ScanJet flatbed scanner, creates absolutely first-rate output, particularly when scanning line art, which is what I use it for most frequently. One of the advantages of going with Hewlett-Packard in these two categories is that its products have become industry standards, offering reliability, technical support, and the promise of continued product support.

The 'New' Old Faithful. The new printer on the block is the LaserJet IID. Its major distinguishing feature is the ability to print on both sides of the paper automatically. That two-sided printing means big savings both in paper and mailing costs.

There are several other significant improvements. The original LaserJet had a single paper tray; the LaserJet IID has two, so you can have letter- and legal-size paper new add-on boards for the Series II that loaded simultaneously, or plain paper and letterhead. An optional envelope feeder holds up to 50 envelopes. The IID also has more built-in fonts than the original.

The IID doesn't render the original Laser-Jet obsolete. The new capabilities come at a hefty price (list price for the IID is \$4,295, lution similar to newspaper-quality photo

\$1,600 more than the II). If double-sided printing and dual-paper-tray convenience will save you time and money, though, it's worth considering.

ScanJet Plus. On the scanner side, the original ScanJet was starting to show its age in the area of gray-scale scanning next to competitive models. Gray scales are used to reproduce the shading in a photograph or in artwork that includes tinted areas. My Scan-Jet has only 16 shades of gray; however, in the past year or so, 256 shades has become a fairly standard scanner capability.

Now HP is back in the thick of things with the ScanJet Plus, offering 256 shades of gray in a unit that is also substantially smaller and lighter than the original. The clincher is the price—the new model lists for \$2,190, just \$100 more than the original, and is widely available at a discount.

More Font Freedom. Several different typefaces for LaserJet printers have become available recently. Bitstream has done a good job in this area for some time. With the company's software and collection of outline fonts, users can create a wide variety of typefaces for the LaserJet in a range of sizes. Many software publishers have embraced the Bitstream font system. It's now included with many high-end MS-DOS word-processing and desktop-publishing programs, such as Ventura Publisher. WordPerfect Corporation sells Bitstream fonts for WordPerfect 5.0 for \$10.

Competition for Bitstream's preeminence in this area comes from Agfa Compugraphic, which worked with HP to create the Type Director package. Type Director (\$225 for 12 typefaces) builds fonts in sizes from 4 to 200 points (that's about 1/25 of an inch to 2 inches tall) in precise half-point increments. The program also builds screen fonts, to give you a what-you-see-is-whatyou-get display in graphics-oriented programs such as PageMaker and Ventura Publisher. Compugraphic is a leading supplier of typefaces for professional typesetting equipment, and the availability of the Compugraphic type library for LaserJet users is a real plus.

Sharper Output. Today there are several offer sharper output. One of the most interesting comes from Intel. The Visual Edge System (\$695; 80286 or 80386 computer and 1 MB expanded memory required) dramatically improves the reproduction of photographic images on the LaserJet. At a reso-

printing, the unenhanced LaserJet can only manage 10 shades of gray—not nearly enough for realistic reproduction. With Visual Edge, you get 37 levels of gray for a very high-quality image at 100 lines per inch, and the printing speed is actually higher than an unenhanced LaserJet's.

Another option is the LaserMaster LX-6 add-on controller. This system is geared for those who want to move beyond the jagged type edges of laser-printer-standard 300 dpi output. For \$4,000, the LaserMaster card gives you 600 dpi horizontally and 300 dpi vertically, without PostScript, from your LaserJet Series II. It also speeds up the printing S.M. process.

HENRY F. BEECHHOLD is the author of The Brady Guide to Microcomputer Troubleshooting & Maintenance (Brady Books, Prentice Hall Press, New York).

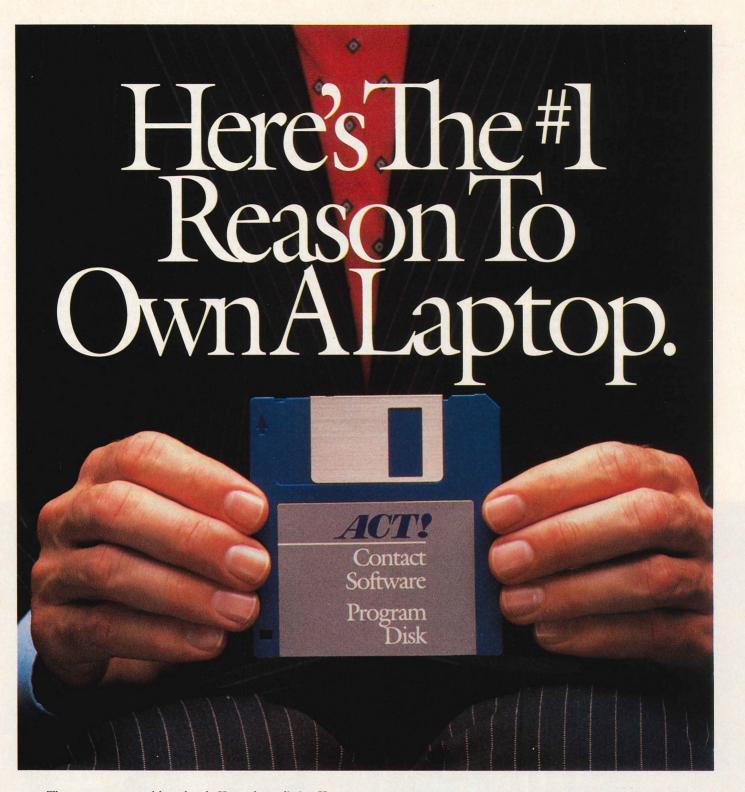
STEVE MORGENSTERN can be reached on CompuServe (ID: 72545,606) or MCI Mail (SMORGENSTERN).

MACINTOSH

BY JIRI WEISS, JR.

Microsoft Word v4.0, the new version of the most widely used Macintosh word-processing package, has some major enhancements. For example, the new PageView feature lets you edit while you have your page layout on-screen. This makes creating documents with multiple columns and headers and footers much easier. Another new feature simplifies creation of tables. Text can automatically wrap around within each cell of a table, and you can change the width of a column simply by dragging the column marker. Word 4.0 will also automatically wrap words around a graphic you position in your document and tell you where it will put page breaks, so you can format your pages as you go rather than wait to see what will happen after you give the Repaginate command. Other enhancements include fully customizable menus and the ability to write and read MS-DOS WordPerfect files. For writers, there are handy niceties such as word count and a feature that puts the slanted quotation marks used in typeset text in place of the ordinary computer-keyboard

Word 4.0 comes with Word Finder, an electronic thesaurus with 22,000 synonyms from Microlytics Inc., and AutoMac III, a macro program from Genesis Micro Software. Also included are templates for mail-



Throw away your address book. Your phone listing. Your monthly planner.

Then pick up a copy of ACT! Contact Software. You'll immediately see why ACT! has become the number-one reason to own a laptop.

You'll see why people say it has revolutionized their business. That it has eliminated their inefficient paper-based systems. That it has effectively doubled or tripled the number of business contacts they can manage. And that, combined with a laptop, it is the most important business tool they own.

You'll see why over 80,000 users wouldn't dream of doing business without ACT!

If your business depends on contacts, we guarantee your productivity will soar with ACT! Especially if you own a laptop.

If you'd like to see it in action, call 1-800-627-3958 for a videotape demonstration or for dealer information.



The Largest Selling Contact Software

© Contact Software International Inc., 9208 W. Royal Lane, Irving, Texas 75063

CIRCLE READER SERVICE 37

MACHINE SPECIFICS

ing labels and documents with drop caps. Until August 31, you also get a free copy of Silicon Beach Software's SuperPaint 1.1. The new Word, which lists for \$395, will still run on a 512K Mac. But users without a hard disk may no longer be able to fit everything they need to run the program on a single floppy. The basic Word program now takes up about 670K. Registered users of any previous version of Microsoft Word can upgrade to Word 4.0 for \$75. An extra \$10 will get you DocuComp, a utility that compares two versions of a document and highlights on-screen or in print the differences between them. This program, which lists by itself for \$160, will also create an item-by-item summary of changes with their locations in the text.

Fonts for Proofing. Proofing your layouts without a LaserWriter can be a frustrating experience. I don't know how many times I have created a document that looked good laid out on an ImageWriter, but turned out completely different when I took it to be laser printed. Bitstream says it has solved that problem with fonts that keep line endings the same whether you are printing on a QuickDraw printer, such as the Image-Writer, or a PostScript printer, such as the LaserWriter. Bitstream offers the fonts for QuickDraw printers, called MacFontware,

in packages of four typefaces in twenty sizes, from 9 to 96 points. Each of the 10 packages lists for \$169.

Painless PostScript. You can add some zip to the text of your newsletter or memo with Smart Art, a \$150 desk accessory from Emerald City Software, Menlo Park, California. Smart Art will create shadows for letters, make them look three dimensional,

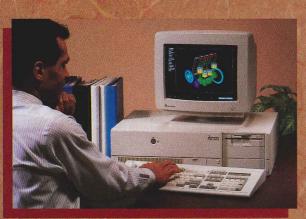
TELEPHONE NUMBERS

Agfa Compugraphic Corp. (508) 658-0200 Applied Engineering (214) 241-6060 Bitstream Inc. (617) 497-6222 Checkmate Technology (800) 325-7347, (602) 966-5802 Emerald City Software (800) 223-0417, (415) 324-8080 Fox Software, Inc. (419) 874-0162 Hewlett-Packard (619) 487-4100 IBM (800) 538-3373, (408) 765-8080 Intel (914) 642-3000 Kensington Microware (212) 475-5200 LaserMaster (612) 944-6069 Microsoft Corp. (206) 882-8080 Microtech International (203) 488-7744. (800) 325-1895

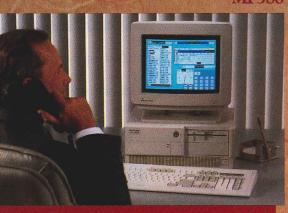
rotate them to any desired position, or make them look like one of those Hollywood movie titles that grow as they come at you from the horizon. It also fits text to a given line length or around an arc. This versatile desk accessory includes 15 such PostScript effects in all. Its publishers claim that Smart Art can be used from within any Macintosh word processor, including Microsoft Word and WriteNow, page-layout software such as PageMaker and QuarkXPress, and Post-Script drawing programs such as Illustrator 88 and Aldus FreeHand. Smart Art requires a PostScript printer.

Cheap Removable Hard Disk. Microtech International may have set a record low price on a removable fixed-disk drive that delivers the speed and capacity of an average hard-disk drive. The \$1,099 Microtech R45 Removable Hard Disk contains the same drive that has been selling for an average of \$1,800 in the Macintosh market for the past year or so. The 42MB drive, developed and manufactured by SyQuest Technology, puts the disk usually sealed inside the hard-disk drive into a removable plastic cartridge. It costs about the same as a hard drive of a similar capacity, but each time you run out of space you can simply insert another \$99 cartridge.

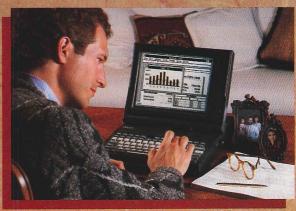
A Mac Look for dBase. Fox Software, the







MP286



MP386s
CIRCLE READER SERVICE 43

MACHINE SPECIFICS

leading vendor of dBase III- and III Pluscompatible software for the Macintosh, has spruced up the look of its FoxBase Plus/ Mac with a report generator that allows users to design reports in proper Mac fashion with MacDraw-like drawing tools rather than code. Users can change fonts, add graphics, and preview their handiwork before printing it out. Other enhancements include a label generator, support for hierarchical menus, and the ability to call from within the program many of the external functions now available for HyperCard. FoxBase Plus/Mac lists for \$495.

JIRI WEISS, JR., is a freelance writer based in Berkeley, Caifornia, and can be reached at MCI mailbox JWEISS.

APPLE

BY CHARLES H. GAJEWAY

The dog days of August are rolling in. The heat and humidity that are so uncomfortable for us can be devastating to Apples. Avoid heat-related failures with the following hints:

Even with air conditioning on, sunlight can raise the temperature inside your computer or monitor by 10 to 20 degrees and make it hard to read. Move your system or pull the shades to keep direct sun off your CPU.

Speaking of monitors, these are the real heat villains of any computer system. I have found that you can reduce heat buildup by using a monitor stand to lift the monitor an inch or so from the top of a IIe, GS, or even your desk. Search mail-order ads for an inexpensive tilt/swivel stand.

Try keeping your printer turned off until you need it. Some printers generate a surprising amount of heat, which increases the temperature of your work area. Laser printers get particularly warm, so batch up your printing tasks and run them out a couple times a day; you might even save a few bucks on your electric bill.

If you have a Ile, a system fan is a good idea; the Kensington Microware System Saver (\$90) is an old standby, and Kensington also offers the System Saver GS (\$100). a much better solution to cooling a GS than the noisy and intrusive Apple unit.

Thanks for the Memory At last, memory prices have begun to normalize. RAM chips and SIMMs are starting to drop and should become pretty affordable in the near future. The typical August business lull can be a good time to upgrade and reconfigure your computer, especially if you put off increasing memory because of 1988's sky-high prices.

If you are purchasing a RAM card, I strongly recommend choosing a unit from either Applied Engineering or Checkmate Technology. These seem to be the most widely used and best-supported products (especially Applied Engineering's seemingly ubiquitous line). To expand a full GS beyond 1.25MB, you might try either a MemorySaver (Checkmate Technologies, \$190 with Extender option) or a RamKeeper (Applied Engineering, \$189). These products both let you install a second memory card plus a battery backup to keep your extra RAM active at all times. This is a great feature, especially for RAM-disk users.

For 8-bit models I recommend only moderate memory expansions, except for the heaviest of AppleWorks users. If you need that much RAM, you should seriously consider a more powerful computer with a higher clock speed (a turbo-XT MS-DOS machine will cost little more than a largecapacity RAM card with battery backup).

CHARLES H. GAJEWAY can be reached on CompuServe (ID: 73357,3577) or on GEnie (ID: C GAJEWAY).

ryone Worked Alike, d Only Have Ic But they don't. So we created a broad line of PC compatible computers to meet your individual computing needs while working within your budget.

Whether you are with a Fortune 1000 corporation, manage a small

business or work at home, there's a Mitsubishi® computer to fit your requirements in size, speed and power.

The sleek mp286L portable is easy to use at home or carry from home to the office. The MP286 is a small footprint desktop PC. For expandability, it's the 32-bit MP386 or the new 16 MHz MP386s the perfect balance of size and power.

For greater convenience and performance flexibility, you can integrate your PC with a wide choice of Mitsubishi peripherals including color monitors, disk drives, scanners and color thermal transfer printers.

See our full line at your authorized Mitsubishi dealer who is ready to listen and recommend just the right Mitsubishi system and peripherals. Or contact the Mitsubishi Information Center by calling in the U.S. and Canada 1-800-556-1234, ext. 25 (in California, 1-800-441-2345, ext. 25).

With over a decade of experience, Mitsubishi has delivered over a half million personal computers earning a reputation for unparalleled quality and dependability.

Mitsubishi Electronics. Personal computers and personal service.

Mitsubishi Electronics America, Inc. Information Systems Division 991 Knox Street, Torrance, CA 90502. Mitsubishi Electric Sales Canada, Inc. 8885 Woodbine Avenue Markham, Ontario L3R 5G1.

Make Word Processing Easier with Macros and Menus

BY ROBERT KENDALL

Three WordPerfect Add-Ons

WordPerfect may be able to tackle practically any word-processing task just the way it is. But there are few people whose work couldn't be made easier by the program's macro capabilities. Macros help you tailor programs like WordPerfect to your needs by storing a sequence of keystrokes—commands or text-and letting you execute it with as little as the press of a single key combination. Macros can take a big bite out of repetitive drudgery and speed up your work considerably.

However, if you're like me, you've probably never gotten around to creating your own macro shortcuts because of the computing conundrum-too often, it takes too much time (and effort) to set up timesaving procedures. So PowerMax Company and Individual Software have done it for you with PowerMax and 101 Macros for WordPerfect respectively. And if these libraries soon have you using more macros than you can keep track of, Applause Software's The Perfect Addition—which adds pop-up menus to WordPerfect—lets you attach macros to its menus, making it easier to recall and use any macro.

PowerMax (Vol. 1)

VERSION REVIEWED: 5.0

SYSTEM REOUIREMENTS: 384K IBM PC, PS/2; two drives (hard-disk drive recommended); DOS 2.0 or higher; 5.25- or 3.5inch (\$3 extra)

PUBLISHER: PowerMax Company, 15840 Ventura Blvd., #845, Encino, CA 91436; (818) 905-5919

PRICE: \$20

OVERALL PERFORMANCE: ★ ★ ★

DOCUMENTATION: ★ ★

ERROR HANDLING: ★ ★ ★

EASE OF USE: ★ ★ ★

SUPPORT: ★ ★ ★

MACROS TO THE MAX PowerMax gives you more than 185 ready-made macros, yet keeps the price down to only \$20 by providing the manual on disk. While having to print out over 50

ROBERT KENDALL wrote about Lotus 1-2-3 utility programs in the April issue of HOME-OFFICE COMPUTING.

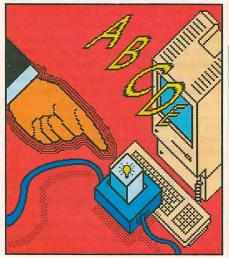
pages of documentation-or scroll through them on screen—is inconvenient, the time and toil this package can save you makes it well worthwhile.

Most macros fall into two basic categories: those that save you only a few keystrokes but are used many times a day and those that automate complex but less frequently encountered procedures. PowerMax offers an impressive array of the first kind, assigning useful functions to all but two of the letter keys in combination with Alt. On top of this, a PowerMax Keyboard Definition file (a standard WordPerfect feature) optionally assigns another set of functions to all the letter keys in combination with Control

Most of the macros have sensible mnemonic assignments. For example, Alt-D deletes a line of text, Alt-T transposes two letters, and Control-B boldfaces a single word-that last step, say, would normally take five keystrokes. With only one keycombination you can also underline a word or change its case, transpose two words, center a line, or print the whole document or just the current page. Writers will appreciate the Control-key macros for creating headers, footers, footnotes, and endnotes. And fans of windowing will be able to open or close a window with one pair of keys and scroll two documents simultaneously with another.

If you don't like any of the key assignments, you can easily reassign macros to different keys. And the PowerMax library contains many other simple macros that you can substitute for those currently invoked by single key combinations.

PowerMax's more complex macros are run by typing in their names after invoking WordPerfect's Macro function. Among these you'll find a macro for automatically taking an address from an on-screen letter and printing it on an envelope. Other timesavers will remove all underlining from a document or create a list in a separate file of EASE OF USE: * all footnotes or endnotes in a document. Another useful set of routines compensates for WordPerfect's inability to control the 101 METHODS TO MACRO margins of all footnotes and endnotes in a document with a single global setting. PowerMax prompts you for your margins and then alters the settings in all the notes.



bugs: Macros that called up PowerMax text files wouldn't run until incorrect printer codes were deleted from the files. The problem was easily resolved by a call to tech support, however; the company says the problem is with WordPerfect, not PowerMax.

Otherwise, the PowerMax collection functioned smoothly and efficiently, offering clear on-screen prompts to guide you when necessary. The documentation is wellorganized and thorough. By the time you read this, PowerMax will also be offering a second volume of WordPerfect macros, as well as a set of optional menus.

101 Macros for WordPerfect

VERSION REVIEWED: 1.0

SYSTEM REQUIREMENTS: 384K IBM PC, PS/2 (640K recommended); two drives (hard-disk drive recommended); DOS 2.0 or higher; 5.25- or 3.5-inch

PUBLISHER: Individual Software, Inc., 125 Shoreway Rd., #3000, San Carlos, CA 94070; (800) 331-3313, (415) 595-8855

PRICE: \$70

OVERALL PERFORMANCE: ★ ★

DOCUMENTATION: ★ ★ ★

ERROR HANDLING: ★

SUPPORT: ★ ★

101 Macros for WordPerfect is one of a series of macro products published by Individual Software for various programs (others include Lotus 1-2-3, Excel, and dBase). Testing didn't always go smoothly, since Despite its name, the \$70 package delivers a a couple of the macros contained minor library of more than 300 macros covering a

PROCESSING WORD

broad range of tasks. The macro library was designed partly as an alternative to Word-Perfect's complex system of function-key commands and terse menus that drives most beginners to a keyboard template.

101 Macros differs most noticeably from PowerMax in its lack of any functions assigned to easy-to-remember key combinations. Instead, you run each macro by first tapping Alt-Z and then typing in a two- or three-letter mnemonic name for the macro

For example, if you want to center and underline a headline you've already typed, it's easier to remember the macro name CU than to remember to place your cursor at the beginning of the line, press Shift-F6 and the down arrow to center the line, and then press Alt-F4, highlight the line, and press F8 to underline the heading.

Unfortunately, many of the macros take no fewer keystrokes to execute than the corresponding WordPerfect commands, and some even require more. Most of the singlefunction macros will therefore be of little value to experienced users unless they rename the macros so that they can be called by a letter key in combination with Alt. This limitation makes the product less immediately useful than PowerMax for most people other than novices.

The package's real strength lies in its automation of complex procedures. For instance, its macros give you a simplified, single key-combination way to print envelopes from a mailing list, set up a document in legal format, or lay out columns to hold numbers for calculations—tasks that normally take several keystrokes each.

Particularly helpful are macros which alleviate the tedious steps needed to mark text that's to be compiled for tables of contents, indexes, lists of figures, and tables of legal authorities. To create an index, for example, you simply move your cursor successively to each piece of text you want to include and press Enter to mark it. Where appropriate, the macro will automatically mark all subsequent occurrences of each text item. Then it creates a new page and generates the index.

Unfortunately, a couple of these macros contained bugs that had to be fixed before they would run. For example, in one macro that called up, or linked to, a second macro, the second macro's name was misspelled within the first macro. That meant I had to go into the first macro and correct the error before the macro sequence would work.

The contents of 101 Macros aren't as consistently well designed as those of PowerMax. For instance, like PowerMax, 101 Macros lets you boldface or underline a single word or center a line of text, but with 101 Macros the cursor must be at the beginning of the text unit rather than anywhere within it. On-screen prompts can be a little those macros does what.

unclear in 101 Macros, and sometimes two similarly functioning macros are inconsistent in the way they prompt you on screen.

The Perfect Addition

VERSION REVIEWED: 3.0

SYSTEM REOUIREMENTS: 512K IBM PC. PS/2 (640K recommended); two drives (hard-disk drive recommended); DOS 2.0 or higher; 5.25- or 3.5-inch

PUBLISHER: Applause Software, 474 3rd Ave., Salt Lake City, UT 84103; (800) 544-2049, (801) 596-0091

PRICE: \$55

OVERALL PERFORMANCE: * * *

DOCUMENTATION: ★ ★ ★

ERROR HANDLING: ★ ★ ★

EASE OF USE: ★ ★ ★

SUPPORT: ★ ★ ★

MENUS WHERE THERE WEREN'T ANY

Like 101 Macros, The Perfect Addition caters to beginning or occasional users who balk at learning WordPerfect's function-key commands, with an appeal for the experienced user as well. This excellent \$55 memory-resident menu system, however, provides a much easier-to-use alternative interface than 101 Macros.

A single keystroke pops up menu items such as File, Print, and Mark along the top of the screen. Using either the cursor keys, a letter key, or a mouse, you select menu options; there are often submenus with further options. The Perfect Addition menus contain nearly all the functions available through the WordPerfect function-key menus, and you can easily add the ones that are missing. The Tab key brings up a help screen for any option.

The program could also be valuable for experienced users who rely heavily on macros, because it lets you add macros to the submenus with a minimum of fuss. This might prove ideal for maintaining ready access to those labor-savers that you don't use every day or don't want to assign to a single key.

The menu names you create for macros can be up to 36 characters each, and you can even create your own help screens to go with them. You can add up to 18 macros to the Macro submenu, or you can add them to any other submenu, although the 20-item limit per submenu means you may first have to delete some of the options already there.

Between PowerMax and 101 Macros for WordPerfect, you're bound to find some valuable shortcuts that you'll turn to on a regular basis. In fact, once the macro bug bites you, you may wonder how you got along all this time without them. And with The Perfect Addition, you won't have to waste time trying to remember which of

ou want business.

The new Sears Home Office Catalog has everything you need to organize a business on a budget. It's 48 pages of computers, fax machines, personal copiers, office furniture and more. With names like AT&T, Xerox, Casio, Smith Corona, Panasonic, Canon, and Magnavox at Sears everyday low prices.

Order your free Sears Home Office Catalog (No. 39FF27128) with just one quick call to our toll free number. 1-800-366-3000.



Sears Catalog OrderlineSM 24 hours a day, 7 days a week.

© 1989 Sears, Roebuck and Co. CIRCLE READER SERVICE 47

Full Impact for Full Reports

BY CHARLES H. GAJEWAY

A New Style of Mac Spreadsheet

Since its introduction, Microsoft Excel has been the best-selling spreadsheet program for the Macintosh. People who often use spreadsheets love the big worksheet, the advanced math features, the ability to link spreadsheets, and—above all—the macros that speed repetitive procedures by linking a series of commands to a single keystroke combination.

But for professionals who collect and analyze raw data, and then must communicate the business sense underlying their numeric results, *Excel* has major shortcomings. I've found its graphing capabilities mediocre, more convenient but less flexible than Lotus 1-2-3's. And when I need to create a report combining text, numbers, and graphs so that, as I work on it, the report is updated automatically to reflect revisions in the data, *Excel*'s lack of word-processing features makes that frustrating.

That's why, when Ashton-Tate introduced Full Impact, I was excited that its spreadsheet also contains sophisticated graphing and word-processing functions. And after working with Full Impact every day for marketing research, I am pleased to report that the publisher did a most creditable job—now I can easily enhance my reports with attractive charts, highlighted notations, and text commentary that help communicate the full significance of my worksheets. Like any program of scope and complexity, though, Full Impact is not perfect. Here's a review of its pros and cons.

WHY I LIKE IT

The software's basic operation is similar to that of other Mac spreadsheets, but with several extras. The most noticeable is an icon bar, just beneath the menu bar, that displays one of three alternate sets of 14 icons. Clicking on one of these icons carries out a menu command directly, the mouse equivalent of a command key. If I don't like the preselected variety of icons, the Modify Icon Bar command lets me customize both the icons and their underlying commands. Beneath the icon bar is the worksheet area.

· When Full Impact opens, it uses the hard disk as "phantom" or "virtual" memory, temporarily storing on disk those portions of my worksheets that exceed memory. Thus, while Full Impact's 256-by-2,048 work-

CHARLES H. GAJEWAY is a contributing editor for HOME-OFFICE COMPUTING.



Full Impact

VERSION REVIEWED: 1.1

SYSTEM REQUIREMENTS: 1MB Macintosh (2MB recommended under Multi-Finder); two 800K drives (hard-disk drive recommended); System 4.1 or higher

PUBLISHER: Ashton-Tate Corp., 20101 Hamilton Ave., Torrance, CA 90502; (213) 329-8000

PRICE: \$395

OVERALL PERFORMANCE: ★ ★ ★
DOCUMENTATION: ★ ★ ★

ERROR HANDLING: ★ ★ ★

EASE OF USE: ★ ★

SUPPORT: ★ ★

sheet is actually smaller than *Excel*'s, I can utilize much more available space. While virtual memory is too slow to use all the time, it's great for those occasional big projects or if I need to open "just one more file" for a moment.

Full Impact's graphics are much better than Excel's. Charts are stored with their origin worksheet instead of as a separate file, and they can be sized and arranged on the worksheet in any combination I could come up with. It's easy to style, label, and annotate charts; and pages can be built of multiple graphs (a major Excel failing) without cutting and pasting into another program.

For my work, Full Impact's word-processing features are its major improvement over Excel. With a simple menu choice, I create a "paragraph" area on the worksheet, then enter text into it with full control over its style (say bold or italic) and orientation (text can be rotated in 90-degree increments). I can include spreadsheet formulas in the paragraph's text that look up or calculate numbers from the worksheet's data. A paragraph can be as small as a single word

or as large as a legal-size page, enabling the creation of a moderate-size report integrating text, graphs, and numbers.

LIKING THE LITTLE THINGS

I found a wide variety of useful smaller features. For instance, when I use the mouse to enter cell-coordinate references in a formula, successive clicks cycle the location through all four possible relative-or-absolute references. That is, the first click results in B2 (a relative cell reference), the second changes it to \$B\$2 (absolute), the third switches to \$B2 (column absolute, row relative), while the fourth produces B\$2 (column relative, row absolute). Not having to type all those dollar signs—which indicate absolute references—is a great relief.

One common problem when entering data into most Macintosh spreadsheets is sluggishness with even medium-size documents. Part of this is because the spreadsheet recalculates the whole document every time a change is made. I can, of course, set recalculation to manual, but that's inconvenient. Instead, *Full Impact* lets me set a recalculation delay so that recalc will not occur until a certain time between keystrokes has passed. This is a great time-saver when entering large quantities of data.

Full Impact's macro function lets me define a macro either as a global routine that will function with any worksheet or as a local set of commands that can be used only within a particular document. This "split personality" helped me customize the program to my working style by creating a library of global macros, and then performing tedious special tasks within each document using separate macros.

When I wish my Mac's display were bigger, Full Impact accommodates me by shrinking the display size of the worksheet several times so that I can see up to 64 pages at once (depending on my monitor's size). A document can be revised while in this reduced mode, which lets me make changes and get a perfect printout without having to toggle the display.

Finally, I really appreciate that the cell coordinates of the worksheet's current upper-left corner appear in the otherwise standard Macintosh scroll boxes as I drag them. That made it far faster and more convenient to scroll around a large worksheet instead of jumping a page at a time.

WHAT'S NOT TO LIKE

I didn't, however, like everything. For instance, Full Impact prints rotated text or

And even though the package says that Full Impact requires only a 1MB Macintosh and two 800K floppies to run, a Mac with at least 2MB and a hard-disk drive provides a much better environment—the program needs at least 800K of available RAM before it will load, and the operating system and program files occupy most of two 800K floppies. This is not unexpected, however; ever since Apple released MultiFinder, it has been increasingly clear that 2MB and a hard drive would be required to run most professional applications.

Full Impact's treatment of lookup tables and dates differs from Excel's or 1-2-3's, so imported spreadsheets need to be checked carefully to be sure that formulas and references are correct. This nuisance should have been avoided; cross-loading data between programs is becoming too common to have to put up with this kind of oversight.

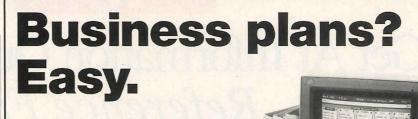
The icon-bar commands were a bit redundant (although I can structure the icon bars any way I like), and some of the command-key choices seemed odd (although I like command-E for Clear because it reminds me of Erase). This is purely personal preference, and I will no doubt get used to the commands as I use the program more.

I LIKE IT SO MUCH, I'LL KEEP USING IT

And I will definitely use it more.

A large part of my day is involved with analyzing and reporting on standardized data, tasks that are a good test of Full Impact's capabilities. I rated Full Impact highly because it offers improved flexibility, capacity, speed, and convenience as compared with Excel. But it does need further improvement in linking spreadsheets, and it could offer more in the way of drawing and word-processing power. The manual was clearly written and well organized, but occasionally lacked detail. Even with deliberate errors, I never got the program to bomb or lock, so error handling was rated excellent. While Full Impact is generally easier to use than Excel, the lack of alignment grids and search and replace, in combination with its scope of features and options, steepens the learning curve enough to lower my judgment of ease of use. Ashton-Tate's support staff is knowledgeable and prompt, but they make you pay extra for support after only 90

Full Impact represents a good value for both spreadsheet novices and experienced number jockeys. The resulting improvement in productivity was well worth the program's relatively modest price and the small effort in converting my old worksheets.



Business Plan

General Ledger

Introducing Venture.TM New software organizes, calculates, drafts and prints --

- Business Plans
- Financial Plans
- Marketing PlansFeasibility Plans
- Contingency Plans

Easy to use, mouse or keyboard. \$349 price also includes--

- CPA-Ready General Ledger
- P&L's plus
 Checkwriting
- Word ProcessingSpreadsheet and
- Database

No risk, 30-day money-back guarantee. Call for demo video or free brochure.

at (407) 241-6050.

Star Software Systems Phone: (213) 533-1190 FAX: (213) 320-8924



1-800-242-STAR Ask for Extension: 405

e

CIRCLE READER SERVICE 49



*To order call our toll-free order line or send \$19.95 + \$3.00 (S & H) Check or Money Order to Count Disk, 2601-38 South Military Trail, Suite 164, West Palm

Beach, FL 33415. Florida residents add 6% sales tax. Dealer inquiries welcome

CIRCLE READER SERVICE 50

Get At Information Quickly with Reference File

BY JACK NIMERSHEIM

An Elegant Memory-Resident Database Manager

I don't know about you, but I used to spend a large chunk of my workday switching among different application programs. While writing a letter with my word processor, for instance, I'd invariably need to look up an address or telephone number stored in a database file. Previously, whenever this happened, my only recourse was to save the unfinished letter, exit to DOS, start my database program, load the appropriate data file, retrieve the record containing the information I required, either print out or make a note of that information, close the database, return to DOS, reload my word processor, and (finally!) get back to work on the letter I was writing when this whole mess started.

Inconvenient? You bet. Is there a better way? You bet—my favorite is *Reference File*, a pop-up database manager.

IN MEMORY, WHERE YOU NEED IT

Consider the following scenario: You're creating a budget forecast with Lotus 1-2-3 and suddenly realize you need to look up the costs for several projects whose records are stored in a Reference File database. No problem. Simply press Alt-F (the default) "hot key" that calls up the program) and your spreadsheet temporarily moves to the background as the Reference File window pops up. You can then retrieve the required information from the window or use Reference File's cut-and-paste function to transfer that information directly into your 1-2-3 worksheet, eliminating potential errors and the need to retype data. Working with Reference File really is that quick and that simple.

Reference File is a terminate-and-stayresident (TSR) program. TSR software, in case you're unfamiliar with the term, loads into your computer's RAM and then remains there, available at the touch of a hot key, even as you work with such other applications as your word processor, spreadsheet, or communications program.

Actually, only specific Reference File

JACK NIMERSHEIM, a writer who appreciates computers, lives and works in Covington, Kentucky.

functions-entering, editing, and retrieving records in a database file-work in TSR mode. Other operations, such as creating a file, changing the design of a database, and importing records from other programs into a file, are performed with a second included module, RF Tools, which you run as a stand-alone program from the DOS prompt. Though somewhat unusual, this is an elegant approach, since it cuts down RAM requirements for the program's most useful features—data entry and retrieval—to a mere 140K. The result is that Reference File peacefully co-exists with any foreground application (your main program) that runs in less than 450K on a 640K system. For example, I had no problems running WordStar and Lotus 1-2-3 with Reference File loaded in the background. In fact, working in tandem with other programs is when Reference File really struts its stuff.

READY TO GO

Installing and running Reference File is so straightforward that most computer novices will have no trouble with it. A simple question-and-answer procedure installs Reference File in its own subdirectory and then configures the program to work properly with a wide range of system components—display types and printers, for example. Once Reference File is installed on your hard disk, you enter RFLOAD at the DOS prompt to make the program's data entry and retrieval functions ready to use.

And make no mistake about it, Reference File is ready to use. The program comes with 15 sample data files, covering a variety of standard database designs—names and addresses, an appointment calendar, inventory records, personnel files, and the like. The samples were designed to be used with the program's comprehensive tutorial, but you can easily delete the original records and even edit the structure (record contents, field sizes, and index fields) of these sample files to adapt them to your own purposes.

CREATING A DATABASE

As mentioned, creating a database requires that you load a second *Reference File* module, RF Tools, from DOS. Selecting the Design New Data File option invokes several screens that walk you through the various steps required to design a new database.



Reference File

VERSION REVIEWED: 1.0

SYSTEM REQUIREMENTS: 512K IBM PC or PS/2 (140K for memory-resident features); hard-disk drive; DOS 2.0 or higher; 5.25- or 3.5-inch

PUBLISHER: Reference Software International, 330 Townsend St., Ste. 123, San Francisco, CA 94107; (415) 541-0222, (800) 872-9933

PRICE: \$89

OVERALL PERFORMANCE: ★ ★ ★

DOCUMENTATION: ★ ★ ★
ERROR HANDLING: ★ ★

EASE OF USE: * *

SUPPORT: ★ ★ ★

First, you assign a name to the new database. For example, I created a database called Writing to record my freelance writing assignments. After I entered the database name, RF Tools asked me to name the first field I wanted in my new file. I specified Magazine, and RF Tools automatically created this field and prompted me to select a data type— text numeric dollar amount, -for the information I wanted to store in that field. I was also given a chance to specify if Magazine was an index field (a field you can sort, or arrange, records by) and what priority it should be given during sorts (first sort, second sort, and so on). I then proceeded to provide this same information for the other six fields (Article, Length, Editor, Due Date, Payment, and Paid Date) I wanted in my database. From start to finish, it took me about three minutes to create and start using this database.

RF Tools includes several additional options that primarily fall under the heading of database maintenance. The Import option, for instance, allows you to pull in data from several popular programs—dBase, Lotus 1-

Our accounting software is so good, it will even help you count sheep.

With the One-Write Plus Accounting System, your business' accounting will be one less thing for you to worry about at night. Why? Because One-Write Plus was designed specifically to meet the needs of small businesses.

Rest assured—we're recommended by experts.

You won't have to worry because One-Write Plus is highly rated by accounting and software experts (PC World gave us a "Best Buy" award). You won't have to worry because One-Write Plus is very easy to use (Software Digest Ratings Report gave us four stars for easeof-use). You won't have to worry about adapting the program to your business, because we've designed it to easily be tailored to virtually any small business. You won't even have to worry about getting started, because installation is so easy, you could do it in your sleep.

With One-Write Plus, running your business is a dream.

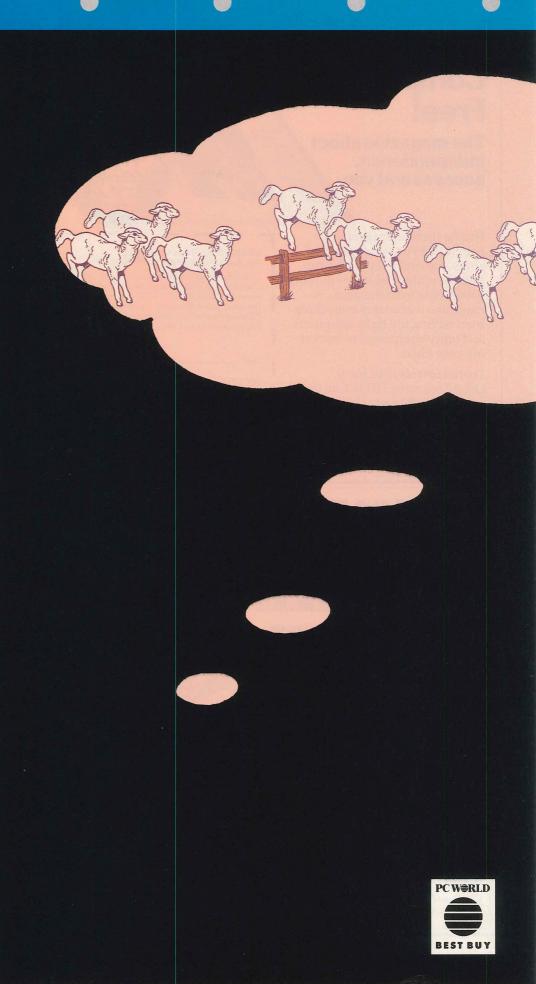
Best of all, with the One-Write Plus Accounting System, you can improve your cash flow and generate the kind of information you need to make important management decisions. And you get all of this for just \$299.

We can't promise that the One-Write Plus Accounting System will eliminate all of the problems of running a small business. But we can say you'll spend less time worrying about your accounting. And that will give you more time to count a few sheep.

one-write plus

Great American Software, Inc. 9 Columbia Drive Amherst, NH 03031-0910 603-889-5400

1-800-528-5015 CIRCLE READER SERVICE 40



Try Home Office Computing...
Free!

The magazine about independence, success and you.



Finally, there's a magazine for people like you—independent and successful people who run their own home business or bring work home from the office. A magazine that covers everything from buying the right computers and office equipment to marketing your ideas.

Try the first issue of *Home*Office Computing FREE. Call today
1-800-288-7812 and ask for Chris,
or return the coupon.

Home Office C O M P U T I N G

Mail to: Home Office Computing
P.O. Box 53561, Boulder, CO 80322-3561

☐ Yes. Send me my Free Issue of Home Office Computing. If I like it, send me a full year (12 issues in all) for \$16.97 — a 52% savings off the cover price. If I'm not totally satisfied, I'll mark "cancel" on the bill and the issue is mine to keep at no cost.

Name	
Address	
City	
State/Zip	

Please allow 6-8 weeks for delivery of first issue. Basic subscription price 12/\$19.97

ORGANIZE AND PROTECT YOUR COPIES OF

Home Office COMPUTING

Collect and preserve an entire year of Home Office Computing with these custom-designed library binders and slipcases.

Bound in midnight blue simulated leather and gold-embossed with the distinctive Home Office Computing logo, these handy space-savers come with FREE gold transfer foil for personalizing date and volume.

Each library binder holds 12 issues on individual snap rods. Open-back slipcases store issues for individual reference.

4	Quantity	Cases
	One	\$ 7.95
0 0	Three	\$21.95
	Six	\$39.95
ome(
Trice .	Some of the source of the sour	Binders \$ 9.95
Things .	ONE OFFICE ONE OFFICE ONE OFFICE OFFI OFFI OFFI OFFI OFFI OFFI OFFI OFF	

Home Office Computing	Linclosed is \$
Jesse Jones Industries, Dept. H.O.C.	☐ Charge my: (minimum \$15) ☐ American Express
499 East Erie Avenue	□ VISA □ MasterCard □ Diners Club
Philadelphia, PA 19134	Card #Exp. date
Please send cases; binders for	
Home Office Computing magazine.	Signature
Charge orders: Call TOLL-FREE 7 days, 24 hours 1-80	0-972-5858
Add \$1.00 per case / binder postage and handling. Outside	le USA \$2.50 per case/binder. (U.S. funds only.)
Print Name	
۸ 11	
Address	
City/State/Zip	
(No P.O. Box Numbers Please) PA residents add 6% sales ta	x
SATISFACTION	GUARANTEED

DATABASES

2-3, and Professional File, among others—directly to a Reference File database. In addition, any software capable of creating either comma-separated or fixed-length AS-CII records can generate a file compatible with Reference File. This means that nearly any file you've created with other programs can be converted easily into a Reference File database.

For a program that requires only 140K of RAM to enter and retrieve data, *Reference File* places few restrictions on the size and complexity of the information it manages. Individual records can be up to 64,000 characters long and can include a maximum of 64 fields. Database size is limited only by available disk space.

REVIEW FACTORS

Reference File comes with a pair of manuals. The User's Guide, the larger of the two, includes all the information you'll need to design, create, and work with the program's databases. The second book, the Reference Library Engine, is a general introduction to the real brains behind this program. It turns out that Reference File is only one of several software tools (collectively called The Reference Set Library) that use this engine to coordinate its TSR operations. Additional programs adapted to work with the Library Engine include special versions of Grammatik III (a writing-analysis tool), the Random House Concise Dictionary, the Reference Software Thesaurus, and Black's Law Dictionary, among others, all of which are available from Reference Software.

The publisher provides comprehensive technical support to all registered users of Reference File for the cost of the phone call. Admittedly, a toll-free number is better, especially if you have to call long-distance; but when a program is this inexpensive, I can accept paying for my own phone calls for technical support. I called the support number on three different occasions, once to inquire about running Reference File under Desqview and twice with questions about the program's cut-and-paste function. All three times, the technical staff answered my questions courteously and completely.

CONVENIENCE AND VALUE

Reference File is a true winner. (Editor's note: Several HOME-OFFICE COMPUTING staff members who regularly use the program agree wholeheartedly.) Since it's a TSR program, Reference File provides the additional convenience of immediate access to all your database records, even when you're working in another application. Think about that the next time you need a piece of information and have to interrupt your work, save a file, exit one program, start a different program, load a file . . . well, you get the picture.



Try the software that works the way an investor thinks.

Now, everything you need to become a more organized, better-informed investor is in one easy-to-use software program.

Do your research and make your own investment decisions easier and faster than ever with The Equalizer® personal investment system, Version 2.0, from Charles Schwab.



Move back and forth from news to research to quotes to portfolio management to on-line trading—in seconds with your personal computer and The Equalizer program.

Special Offer: SAVE \$100, or get a FREE 2400 baud modem when you order

For a FREE brochure, call now: 1-800-472-3800

NAME	Ma maray	ENGLY THE THE SEC OF
ADDRESS	io etimpe n	wally see time
CITY	(12(Ca) 52)	and are aren one
STATE/ZIP	facts and	to means building
	The same	□ DAY
PHONE ()		□ EVENING

101 Montgomery St., Dept. S San Francisco, CA 94104

Charles Schwab

America's Largest Discount Broker

Charles Schwab & Co., Inc., does not make investment recommendations or endorse any particular source of investment advice. FHVBC

Quicken vs. Checkwrite Plus

BY ROBERT CULLEN

A Side-by-Side Comparison of Two Leading Check-writing Programs

Paying bills ranks up there with doing laundry as one of life's unpleasant realities. But thanks to check-writing programs, washing machines, and dryers, these chores are automated to save you time. And check-writing software can also help you organize your finances more effectively.

Quicken and Checkwrite Plus are two popular check-writing programs that handle rudimentary small-business bookkeeping. They have basic similarities—no matter which of the two \$50 packages you choose, you will be able to write and print checks, automate recurring transactions, and code and track your expenses. To keep your computerized books current, remember to enter transactions made without the computer. And there's still no easy way to feed preprinted checks into your printer. Beyond these similarities, each program offers its own benefits to someone running a home office.

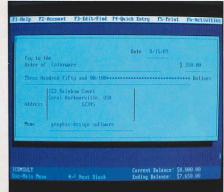
OUICKEN'S EASE

Intuit's *Quicken* v2.0 (128K Apple, 256K IBM PC, PS/2, 512K Macintosh) capitalizes on the universal familiarity of checkbooks to ease users smoothly into computerized check writing and personal accounting. With *Quicken* you establish a checking account and deposit cash or enter your balance before you write checks.

Selecting *Quicken*'s check-writing function brings a facsimile check to the screen with the current date on the appropriate line. You enter the payee's name and numerical amount, and *Quicken* spells out the amount on the second line. That timesaving feature alone made me like the program.

An address block is featured in the lower left-hand corner of the check for use with windowed envelopes. Typing a quotation mark copies the payee name onto the first line of the address block—another labor-saving feature.

Beneath the address block is a single memo line, which is the door to *Quicken*'s powerful reporting features. Here you as-



Check-writing screens from Checkwrite Plus (left) and Quicken (right) are almost identical.

sign payments to various budgeting categories and type in information that will appear on the check as a memo for the transaction. You categorize your payments (for example, groceries, utilities, phone, business expenses, interest expenses, income sources, and payroll) so you can later analyze how you spent your money.

You can also split payments among multiple categories, which is especially useful for small businesses. For example, you can easily divide a telephone bill into personal (non-tax-deductible) and business (deductible) portions. Or, use the split-transaction feature to track payroll deductions, total them, and then manually transfer them to federal payroll tax forms.

You don't have to memorize your categories. Simply press Control-C to display them and then select the one you want transferred to the memo line. *Quicken* comes with suggested budget categories, but I modified them to reflect the expense items on Schedule C of my personal tax return.

Once you've assigned a payment to a category, *Quicken* records the transaction. It transfers the check information to the check register, automatically adjusting the balance. The new balance is displayed in the lower right-hand corner of the check-writing screen, so you always know the available balance before you select the check-writing option. Again, don't forget to enter the withdrawals and deposits made to your account

MANUFACTURERS

Intuit, Inc., 540 University Ave., Palo Alto, CA 94301; (415) 322-0573.

MECA Ventures, Inc., 355 Riverside Ave.; Westport, CT 06880; (203) 222-9150.

while you're away from the computer.

Quicken also features shortcut commands to minimize keystrokes once you become familiar with the program. These commands are stored in clearly labeled pull-down menus at the top of the screen.

Though not a full-featured double-entry accounting program, *Quicken* provides sufficient flexibility to handle small-business bookkeeping chores. Several chapters in the program's manual—which is well written and amply illustrated—describe how to track accounts payable and accounts receivable, and complete other bookkeeping tasks. The program can also track income and expenses for rental properties.

Overall, Quicken is a good choice for home-based businesspeople who want an easy-to-use personal and small-business account-tracking program. Now that I'm familiar with Quicken, I wish it did more, like prepare tax returns and manage investments. However, Quicken does transfer data to three popular tax-preparation programs: TurboTax, J.K. Lasser's Your Income Tax (both for IBM PCs), and MacInTax (for Macintosh). Quicken can also transfer data into Lotus 1-2-3-compatible and Symphonycompatible spreadsheets with a \$20 transferutility disk.

CHECKWRITE PLUS'S EXPANDABILITY

Quicken was designed to automate check writing and personal bookkeeping. MECA's Checkwrite Plus (256K IBM PC, PS/2 and compatibles) was designed as part of Managing Your Money, a popular personal-finance program that includes tax and insurance analysis, retirement planning, and investment management, as well as budgeting and check writing.

Managing Your Money (\$220) has gar-

ROBERT CULLEN wrote "Checkless Checkwriting" in the May 1989 issue.

FINANCE

nered high praise for its user-friendly design and jargon-free approach to personal financial management. However, to compete with lower-priced check-writing packages like *Quicken*, the publishers of *Managing Your Money* repackaged the check-writing and budgeting portion as *Checkwrite Plus*.

Checkwrite Plus retains its compatibility with Managing Your Money, which gives users an easy (and discounted) avenue to upgrade to a full-featured personal-financial-management program. But if you choose to upgrade to a different program, the transition is less straightforward.

Checkwrite Plus handles single-entry, small-business accounting. An added bonus is the loan calculator, which lets you calculate periodic payments for loans of varying size, interest rate, and duration.

Unlike Quicken, which you learn as you go, Checkwrite Plus requires that you go through several setup steps before writing and printing checks. Following Checkwrite Plus's manual, you first set up money accounts for checking, savings, and credit cards. Next, define your budget categories and identify which payments are tax-deductible. Then enter information on recurring loan payments, such as home-mortgage and car payments. After that, you establish other recurring-payment categories for vendors you pay regularly-telephone, electric, and credit-card companies. Finally, enter information about your paychecks, and you're ready to start writing checks. A new feature for both Quicken and Checkwrite Plus allows you to make electronic payments through the CheckFree system. (See review on page 32 of the May issue.)

Checkwrite Plus is without question more difficult to master than Quicken. However, once you get the hang of this program, it offers broader accounting capabilities. For example, Checkwrite Plus consolidates transactions from multiple accounts to produce profit-and-loss statements and other reports—a feature Quicken lacks. Checkwrite Plus also has more flexibility in labeling sources of funds, such as cash-management accounts offered through securities firms. And the utility for exporting data to spreadsheets is included in the program.

So which is the better program for your home office? Quicken is best suited for businesspeople who dread accounting and want an easy system for budgeting and tax-record keeping. It's also a good choice for those who are not sure how their automated accounting needs will expand. Checkwrite Plus appeals to home-office users equipped with a modicum of accounting sense and the willingness to spend several hours learning a more powerful program. And Checkwrite Plus's origin in a larger program makes it a good choice for someone interested in upgrading to Managing Your Money.

PC Voice Mail, now only \$199.

For an ear-opening telephone demo call: 1-800-6-WATSON Ext. 137

Now get a combined PC-based voice mail, data modem, and telephone answering system—from only \$199. With Watson, you'll profitably improve your business communications with clients, colleagues, sales and service reps, field staff, vendors.

Benefits Of A \$20,000 + Voice Messaging System Or "Personal Receptionist" For As Low As \$199

Look at all of these advanced features:

Voice Mail—Watson's automatic telephone answering lets callers leave and receive messages of any length 24 hours a day, 7 days a week. Ends "telephone tag" with clients and colleagues. Forwards messages automatically to mobile phones and pagers. Retrieve messages from any touchtone phone—even a car phone. Never miss an important call! And Watson provides "big system" professional sound quality!

Up To 750 Private "Mailboxes"—Give up to 750 of your colleagues or clients an individual, confidential "voice mailbox." Use them to receive private messages or record special messages for individual callers.

Electronic Telephone Book—In one keystroke, access any of up to 750 telephone numbers, then use automatic dialing and re-dialing if busy. Store key information on contacts and get it immediately when you need it.

Hayes-Compatible Data Modem— Comes complete with 1200 BPS Hayes-compatible modem (or optional 2400 BPS modem). Transfer your data files and access Telex, E-Mail, Dow Jones, or other public databases.

Simultaneously Run Popular Business Programs—Run programs such as Lotus 1-2-3 while Watson records or delivers messages.

Plus—Watson efficiently guides callers through the options they have in leaving messages ... Delivers special pre-recorded messages to individuals at pre-determined times ... Automatically forwards messages to other telephone lines or numbers ... Provides an electronic calendar with automatic alarms and telephone notification.

30-Day Risk-Free Trial Installation

Try Watson for 30 days. If you aren't 100% satisfied, send it back for a prompt and full refund. No questions asked.

Demo Hotline

For a telephone demo call 1-800-6-WATSON EXT. 137 (in MA 1-508-651-2186 EXT. 137). Tell us EXT. 137 and receive a free five pack of diskettes if you purchase.

Order Hotline

To order Watson call 1-800-533-6120 EXT. 137 (In MA 1-508-655-6066 EXT. 137). Tell us EXT. 137 and receive a free five pack of diskettes with purchase. Price: \$199. For optional 2400 BPS modem add \$100. MasterCard, VISA, and American Express accepted. Credit card or check must accompany order.



OVER 35,000 SOLD

Why I Traded Up to a 2400-bps Modem

BY ALFRED GLOSSBRENNER



My Scottish grandfather used to joke that he could hold onto a dollar until George Washington grinned. He'd roll over in his grave if he knew I'd just bought a 2400-bps modem. He

wouldn't even know what a modem was. But as long as he knew there was a less expensive way of accomplishing the same thing (using a 1200-bps unit, for example), he would disapprove.

I had good reasons for making the purchase. They may or may not apply to you. Is it time for you to trade up to 2400 bps? Or, if you don't own a modem, should you start out with a 2400-bps unit? Let's examine several facets of the issue.

COMPARING TRANSMISSION COSTS

A 2400-bps modem transmits data at a speed of 2400 bits per second (bps). (Bps is sometimes referred to as baud rate, but it's not an accurate characterization at 2400 bps.) That translates as 240 bytes, or characters, per second. To find out how long it will take to upload or download an entire MS-DOS floppy disk (360K) at 2400 bps, divide 360,000 by 240. That gives you 1,500 seconds, which translates to 25 minutes. Transmitting the same amount of data at 1200 baud will take approximately twice as long.

Sending information twice as fast at 2400 bps doesn't necessarily mean you spend half as much. That depends on what each minute costs you. On CompuServe, each minute of connect time at 1200 or 2400 bps costs \$.21. Downloading 360K of data at 1200 bps would thus cost \$10.50, but downloading the same data at 2400 bps would cost only \$5.25, a savings of \$5.25. But if you do most of your downloading from a local bulletin-board system or to and from a local office, your on-line time may be free.

Unlike CompuServe, some on-line systems charge you more for signing on at 2400 bps. For example, GEnie users pay \$.10 per

ALFRED GLOSSBRENNER is the author of Alfred Glossbrenner's Master Guide to Free Software for IBMs and Compatible Computers, The Complete Handbook of Personal Computer Communications, and many other books. He can be reached on CompuServe (ID: 70065,745) or MCI Mail (ID: AGLOSSBRENNER).

non-prime-time minute at 1200 bps, but \$.17 per minute at 2400 bps. Not every on-line system offers 2400-bps service. This is gradually changing, but even systems that do offer 2400-bps service may require that you dial a special long-distance access number.

I decided to take the 2400-bps plunge because one of the fields I cover (shareware and public-domain software) requires a great deal of downloading. The faster speed has been a real boon, particularly since, like most professionals, I feel that my time is valuable.

Yet, for many years, most of my on-line activity centered around electronic mail, conferencing, and searching on-line databases. These activities involve reading and

A 2400-bps modem is twice as fast as a 1200-bps unit. Thus, you can theoretically cut file-transfer time in half.

responding to what appears on-screen, something even an Evelyn Wood graduate can barely do at 1200 bps, let alone at twice that speed. And none of these tasks involves much in the way of data transfer. So for conferencing and reading electronic mail, a 2400-bps modem won't cut your on-line time or costs much, if at all.

HIGH-SPEED ERRORS ARE TWICE AS BAD

The only way to estimate the cost of transferring a file from point A to point B is to assume a perfect connection. But in the wild world of the deregulated telephone industry, not every connection is perfect. That's a fact of on-line life, but it assumes even greater importance when you're dealing with 2400-bps communications.

At 2400 bps, you're packing twice as many bit signals into the same second as you are at 1200 bps. Consequently, a burst of static or line noise that might cause two errors at 1200 bps will result in four errors

at 2400 bps.

That leads to at least two possibilities. Text files transmitted without an error-checking protocol on a noisy phone line at 2400 bps may contain more errors. And transmitting a program or other binary file with an error-checking protocol over those lines will take longer. Error-checking protocols like XModem, Kermit, and others call for retransmitting an entire block of data if even one bit is received in error. The result is that on a noisy phone line your actual throughput will almost certainly be *less* than 2400 bits per second.

COMPARING MODEM COSTS

Only a short time ago, a genuine Hayes SmartModem 2400 external modem listed for \$899 and sold for around \$700. Today, however, the same unit lists for \$599 and carries a street price of \$430.

Prices for Hayes-compatible or "AT command set compatible" modems have fallen as well. In fact, in some cases the price gap between a modem that handles 300 and 1200 bps and one that handles 300, 1200, and 2400 bps is virtually nonexistent. This more than anything else convinced me that it was time to trade up. I bought an Avatex 2400 external modem for \$150 from Megatronics, Inc. ([801] 752-2642).

It was a question of spending \$430 for the Hayes or \$150 for the Avatex. Or to put it another way, assuming the \$5.25 savings per 360K of data transmitted (from the calculations above), I would have to download 82 disks from CompuServe to pay for the Hayes or 29 to pay for the Avatex. There was no way I could justify the Hayes and no way I could resist the Avatex.

It may be that I'm blessed with particularly good phone lines, but none of the errorrate problems I had feared have manifested themselves. The modem works just like the 1200-bps unit it replaced, but twice as fast.

If you're wondering whether or not to get a 2400-bps modem, Hayes compatibility is essential. But modems have become such a commodity that virtually any reputable manufacturer can be trusted to put out a good product. Shop for the best price and make your decision pretty much on that basis. I think you'll find that 2400-bps capability—whether you use it every day or only once or twice a year—is not only useful, but eminently affordable.

HYHNA HAYES MODEM IS ONLY AS GO

If you made the finest modems in the world, would you trust their performance to someone else's software? Software you knew really couldn't deliver?

We couldn't. So we created the most advanced communications software possible for IBM® PCs and compatibles. Smartcom III.™

Smartcom III supports Hayes V-series[™] features such as data compression and error-control as well as multiple sessions through both comports. It also incorporates a built-in text editor, a peruse buffer and a powerful scripting language called SCOPE.[™] With the scripting capability of SCOPE, you can automate tedious functions and repetitive tasks as well as create custom communications solutions.

Yet with all its sophisticated offerings, Smartcom III's menudriven interface makes it easy to use. And to make it easy for your company to buy, Hayes is now offering a Multi-Copy License that can cut costs by more than 35%.

So if you own a Hayes modem, it makes sense to get Smartcom III. It'll

bring out the best in the best.

And if you happen to own a modem other than a Hayes, it still makes sense to get Smartcom III. Because it'll make the best of what you've got.



For your nearest Hayes Advanced Systems Dealer, call 800-635-1225. Hayes Microcomputer Products, Inc., P.O. Box 105203, Atlanta, GA 30348.

CIRCLE READER SERVICE 41

Promoting Your Business on a Tight Budget

BY RONNIE GUNNERSON

A Public-relations Expert Tells You How to Get the Most Out of Your Promotion Efforts

P.T. Barnum you're not, but you do understand the value of promotion. You know that the more potential customers hear about your products or services, the more likely they are to come knocking on your door. You know that the better connected you are, the better your chances of attracting new business.

You even know how to build your contacts-join professional organizations, coordinate fundraisers, sponsor community activities, and give seminars. The list could go on forever. Unfortunately, neither your time nor your money will. Deciding how much of each to allocate to your promotional efforts is every bit as challenging-and as critical—as creating your product.

Here, Dr. Frances J. Hynds, president of home-based Matrix Works, Inc., in Los Angeles, offers some advice on budgeting your time and money. Dr. Hynds headed her own public-relations agency for 15 years. She earned her doctorate in communication theory and, from 1979 to 1985, was a publicrelations lecturer at the University of Southern California School of Journalism. This year, she launched Matrix Works, a research and communications firm. She has written articles and brochures, conducted seminars, and lectured extensively on public-relations practices. Hynds knows the difference between a good thing and too much of a good thing.

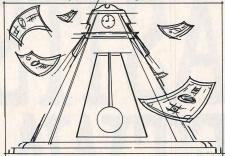
Her steps to successful promotion follow:

- 1. Start with market research. Promotion is an extension of your overall marketing strategy. Put your marketing plan in place before you launch your public-relations program. Answer these questions: Who needs and wants my services? How many others are offering the same or similar services? Is there a basic need not being met by existing businesses? What's my niche?
- 2. Carefully allocate your time and money. For the first six months you should try to

RONNIE GUNNERSON, a contributing editor, wrote "How Ma Bell Can Help You Sell," in last month's issue.

earmark half your time and budget for promotion. You should get your business off the ground before you start promoting yourself, however, since the first thing people want to know is who your clients or customers are and what kind of reputation you

After the first six months, 20 percent of your time and budget is a reasonable allocation. But you must constantly monitor how they are spent. It's too easy to get involved in community activities and professional organizations, start feeling good about the contribution you're making, and then wind



up spending more time than you should. The best defense, bothersome as it may seem, is to keep records of the time you give away.

- 3. Be careful of where you spend your time. Two factors are crucial in making this decision: Where you will realize the best return on your investment of time, and where you want to spend time. Strike a balance between the two. Don't devote energy to an organization or a cause just because you think you should.
- 4. Consider other approaches. Many promotional avenues exist besides organizational work. You can hand out everything from matchbooks to brochures. Or donate some time or money to a cause that you believe in: Sponsor a local Little League team for the price of a few uniforms, donate your product or service, or sponsor a contest. You can also hold special events targeted to your audience; or showcase your products, portfolio, or state-of-the-art equipment by holding an open house.
- 5. Don't count on getting the media's attention. People often equate public relations with media coverage, but media coverage is hard to come by, and many businesspeople are not comfortable dealing with the press. That's not to say media coverage is unim-

portant. You may have news well worth telling, and with enough pizzazz, you can captivate reporters.

6. Consider all of your options. If you are looking for an economical way to reach the media, consider hiring a student intern for about \$10 an hour to write your press releases and handle follow-up phone calls.

Putting an outside agency on a modest retainer would cost at least \$300 a month, and often much more. Hiring an agency may not be as effective as hiring specialists on a per-project basis. Professionals will cost you \$50 to \$150 an hour.

For more information on public-relations resources in your area, contact the Public Relations Society of America (P.R.S.A.) research information center at 33 Irving Place, New York, NY 10003; (212) 995-0148.

- 7. Remember, promotion is never free. Only you can decide how much money to spend on all these efforts. A serious misconception about do-it-yourself public relations is that all you're devoting to it is your time. In other words, it's "free" promotion. Just remember, nothing is free in the business world. The time you spend promoting yourself is time you are not spending providing your service or creating your product. Divide your income by how many hours you work to figure out your hourly rate. Multiply that by the number of hours you put into public relations and you can determine how
- much your "free" promotion actually costs.

 8. Is the effort worth the expense? One way to gauge that is to establish a benchmark in the beginning: Your goal could be X number of dollars' worth of business from a particular promotional activity within a specific time frame. Or your goal could be to gain distribution of a product within a specific geographic area.

There's a caveat, however. Even if you get new business or gain distribution, could you be getting more? The only way to find out is to start the process over again. Promotion is an ongoing activity. If you don't follow the entire process-research, planning, implementation, and evaluation-you might as well throw your money away.

How public relations works is the subject of a pamphlet titled A PR Primer for Management, written by Dr. Frances Hynds expressly for business owners and others in management. To obtain a copy, send a \$2 check payable to Matrix Works, Inc., to P.O. Box 69454, Los Angeles, CA 90069.

No other training—in school, on the job, anywhere—shows you how to trouble-shoot and service computers like NRI

HARD DISK

20 megabyte hard disk drive you install internally for greater data storage capacity and data access speed.

PACKARD BELL COMPUTER

NEC V40 dual speed (4.77 MHz/8 MHz) CPU, 512K RAM, 360K double-sided disk drive.

MONITOR

High-resolution, non-glare, 12" TTL monochrome monitor with tilt and swivel base.

TECHNICAL MANUALS

With professional programs and complete specs on Packard Bell computer.

DISCOVERY LAB

Complete breadboarding system to let you design and modify circuits, diagnose and repair faults.

DIGITAL LOGIC PROBE

Simplifies analyzing digital circuit operation.

moving from the fundamentals to sophisticated computer servicing techniques. Step by easy step, you get the kind of practical hands-on experience that makes you uniquely prepared to take advantage of every opportunity in today's top-growth field of computer service.

What's more—you learn at your own pace in your own home. No classroom pressures, no night school, no need to quit your present job until you're ready

to make your move. And all throughout your training, you have the full support of your personal NRI instructor and the NRI technical staff always ready to answer your questions and give you help whenever you need it.

Your FREE NRI catalog tells more

Send today for your free full-color catalog describing every aspect of NRI's innovative computer training, as well as hands-on training in robotics, video/ audio servicing, electronic music technology, security electronics, data communications, and other growing high-tech career fields.

If the coupon is missing, write to NRI School of Electronics, McGraw-Hill

Continuing Education Center, 4401 Connecticut Avenue, Washington, DC 20008. PC/XT and XT are registered trademarks of International Business Machines Corporation School of For career courses **Electronics** approved under GI bill McGraw-Hill Continuing Education Center check for details 4401 Connecticut Avenue, Washington, DC 20008 **☐ Check one FREE catalog only** Security Electronics **Computers and Microprocessors** Electronic Music Technology Robotics TV/Video/Audio Servicing Basic Electronics Data Communications Computer Programming Name (please print) Address City/State/Zip 155-089 Accredited by the National Home Study Council

DIGITAL MULTIMETER

Professional test instrument for quick and easy measurements.

LESSONS

Clearcut, illustrated texts build your understanding of computers step by step.

SOFTWARE

Including MS-DOS, GW BASIC, word processing, database and spreadsheet programs.

Only NRI walks you through the step-by-step assembly of a powerful XT-compatible computer system you keep—giving you the hands-on experience you need to work with, troubleshoot, and service all of today's most widely used computer systems. You get all it takes to start a money-making career, even a business of your own in computer service.

No doubt about it: The best way to learn to service computers is to actually *build* a state-of-the-art computer from the keyboard on up. As you put the machine together, performing key tests and demonstrations at each stage of assembly, you see for yourself how each part of it works, what can go wrong, and how you can fix it.

Only NRI—the leader in career-building, at-home electronics training for 75 years—gives you such practical, real-world computer servicing experience. Indeed, no other training—in school, on the job, *anywhere*— shows you how to trouble-shoot and service computers like NRI.

You get in-demand computer servicing skills as you train with your own XT-compatible system—now with 20 meg hard drive

With NRI's exclusive hands-on training, you actually build and keep the powerful new Packard Bell VX88 PC/XT compatible computer, complete with 512K RAM and 20 meg hard disk drive.

You start by assembling and testing the "intelligent" keyboard, move on to test the circuitry on the main logic board, install the power supply and $5\,\%$ " disk drive, then interface your high-resolution monitor. But that's not all.

Only NRI gives you a top-rated micro with complete training built into the assembly process

Your NRI hands-on training continues as you install the powerful 20 megabyte hard disk drive—today's most wanted computer peripheral—included in your course to dramatically increase your computer's storage capacity while giving you lightning-quick data access.

Having fully assembled your Packard Bell VX88, you take it through a complete series of diagnostic tests, mastering professional computer servicing techniques as you take command of the full power of the VX88's high-speed V40 microprocessor.

In no time at all, you have the confidence and the know-how to work with, troubleshoot, and service every computer on the market today. Indeed you have what it takes to step into a full-time, money-making career as an industry technician, even start a computer service business of your own.

No experience needed, NRI builds it in

You need no previous experience in computers or electronics to succeed with NRI. You start with the basics, following easy-to-read instructions and diagrams, quickly

10 Ways to Give Your Home Business a Corporate Image

BY PAUL & SARAH EDWARDS



A strong business image helps attract clients and customers and makes it easier for you to charge satisfactory fees and prices. Last month, we discussed the first step in creating a positive

business image: giving your business a name that describes what you do and the benefits you offer. Of course, there is more to a business image than a name. Here are 10 of our favorite techniques for projecting a strong image.

- **1. Get a business telephone line.** An effective name doesn't help much if people can't find it in the phone book or when calling information.
- 2. Answer the phone with finesse. We answer our phone with a pleasant greeting and our business name—"Good morning, Home Office Information Company." If you receive both business and personal calls on your incoming phone line, replace your business name with your own name: "Good morning, this is Sarah Edwards."

Call your answering service or answering machine periodically to get an idea of the impression it's making. Most answering services allow you to specify how you want them to answer. Unless your business is writing jingles or being a clown, beware of cutesy greetings.

3. Give yourself a respectable address. Benefiting from street traffic is not a factor for most home businesses, but the image your location creates is still important. If your business card attracts puzzled comments like "I don't remember any office buildings in that area," you should consider using an alternative address.

Our town house has an ideal address on Second Street, which could be in a business district, but we didn't think that using our unit number on our letterhead would convey the image we want. Using a post-office box

was even less appealing. So we use a suite number instead of a #. We even know a consultant who lives in a single-family home and uses a suite number.

When your street name itself is unsuitable, use a mail-receiving service with a street address that communicates a business location, such as Broadway. That's preferable to using a post-office box.

4. Communicate quality with a custom logo. The more distinctive your printed material, the more likely it will be remembered. Rather than selecting a logo from

Full-size checks with raised numbers are more businesslike than personal checks with pastel seashells.

among the standard designs your printer offers, use a custom-designed logo on business cards, letterhead, envelopes, and invoices

- 5. Show substance with an employer identification number. Many business forms request your Employer Identification Number. You can operate without an I.D. number if you don't have any employees, but it's a free way to dress up your business. (Apply at the nearest IRS office.)
- 6. Use business checks. Imagine that you have received two checks in the mail. One is a pocket-size multicolored check with pastel seashells. It was filled in by hand. The other is a full-size check on business stock. Your name was typed in, and the amount was imprinted in raised numbers by a check-writing machine or printed with a computer. Which check conveys the more businesslike image? The answer is obvious, and yet how often do people overlook such a simple way to look professional?

Full-size business checks often cost little more than the smaller personal checks. Check-writing machines for entering the amount in large raised numerals cost up to \$200 and can be purchased at an office-supply store or from a mail-order catalog. You can also use finance software with your

computer to print checks (see "Quicken vs. Checkwrite Plus," page 28).

- 7. Use only top-quality paper. The image that your printed communications project is important because it's often the first or only impression others get of you. You don't want to be represented by a badly printed letter, business card, or brochure, so use top-grade paper, which both looks and feels professional. We recommend 70-pound bond for letterhead and envelopes. Printers mark up the price of quality paper significantly, so buy paper at an office-supply store and give it to your printer as "customer stock."
- 8. Equip your office like a pro. The cost and size of today's electronic office equipment make it possible to furnish your home office with the same equipment you'd expect to find in any top-notch office in your field. Besides a computer, the best equipment for enhancing your image includes a photocopier that makes quality plain-paper copies, a laser printer, and a fax machine. Being able to give your fax number on request is a surefire way to convey that you're more than a marginal business. And if you have a fax machine, include the number on your business cards.
- 9. Polish your correspondence. In a 1985 nationwide survey of executives by Communispond, Inc., a national communications consulting firm headquartered in New York City, four out of five executives listed writing as one of the most neglected skills in business. Even if your words don't flow gracefully from your brain to the screen, your correspondence can be grammatically correct. We've used *Grammatik* (Reference Software [415] 541-0222) for years to help make sure our correspondence, proposals, and brochures are grammatically clean.
- 10. Select a strategic office entrance. If you receive business guests in your home office, consider installing a separate entrance or try to locate your office near enough to the entrance so business guests don't have to walk through or past living quarters. If there is no other alternative, use tasteful screens, drapes, or dividers to separate personal areas of the house from business areas.

None of these steps will require much work or money. It's just a question of making a concious effort to always look and act professional.

PAUL & SARAH EDWARDS are the authors of Working from Home, Everything You Need to Know to Live and Work Under One Roof (Jeremy P. Tarcher, 1987) and the new audiotape, How to Succeed at Working from Home (TDM/McGraw-Hill). They also cohost "The Home Office Show" on Business Radio Network. Contact them on the Working from Home Forum, which they operate on CompuServe (GO WORK).



Provide for the future.

When you're building a business team, it makes sense to provide them with the best business tools. That means getting a word processor that evolves with your needs, not one that's tied to the past.

WordPerfect® has been, and continues to be, the corporate standard in word processing. When you standardize on WordPerfect, you'll speak the same language as the majority of government agencies, law firms, and large corporations in America.

And we've continually upgraded and improved WordPerfect to meet your changing demands. But not by ourselves. By answering more than 10,000 toll-free calls a day, our customer support

group provides our development team with valuable suggestions on how to improve WordPerfect. Version 5.0 is our latest response to those suggestions.

It makes sense. You've invested a great deal in your people, now invest in a word processor that is going to grow with them.

Consider the options. You'll find that the decision to buy WordPerfect will get the whole company behind you. Not only now, but in the future. And that's an investment with high returns.

WordPerfect

1555 N. Technology Way Orem, Utah 84057 Telephone (801) 225-5000 Telex 820618 FAX (801) 222-4477 CIRCLE READER SERVICE 51



Avoid the ins and outs of other software packages.

Today's manager has to juggle dozens of different tasks. But dealing with the ins and outs of different software packages shouldn't have to be one of them.

Now there's Framework III,™ the one program that

does everything a manager needs to do.

Framework III is a tightly linked set of the six most often-used functions you'll find on a computer: word processing, spreadsheet, database, outlining, graphics, and

communications.

You use the same easy-to-learn interface for all of them. So you can concentrate on managing your business. Instead of managing your software.

For example, you can interrupt word processing to log on to a mainframe; get needed data; jump into a spreadsheet; use the data to

create a graph; import a file from dBASE® products, Lotus 12-3® or WordPerfect®; and insert it into your document. Without ever leaving the program. It's that simple.

And you won't have any trouble keeping track of it all, because Framework III lets you open as many windows as you'd like to—simultaneously.

There's even a version for local-area networks. Framework III LAN simplifies the job of coordinating your workgroup. You can use its built-in electronic mail to



Would you rather carry around six programs, or one?

circulate memos. Or create complex documents that require input from several people.

What does it all add up to? A product that offers a more efficient way to organize your thoughts, analyze your information, and communicate your decisions.

Which is, when you think about it, a more efficient way to manage your business.

Free Video.

To get the complete picture of what Framework III can do, just call 1-800-437-4329,* ext. 3044, and we'll

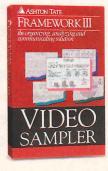
rush you a free videotape that explains it all.

Framework III. It's all the software you'll ever need.

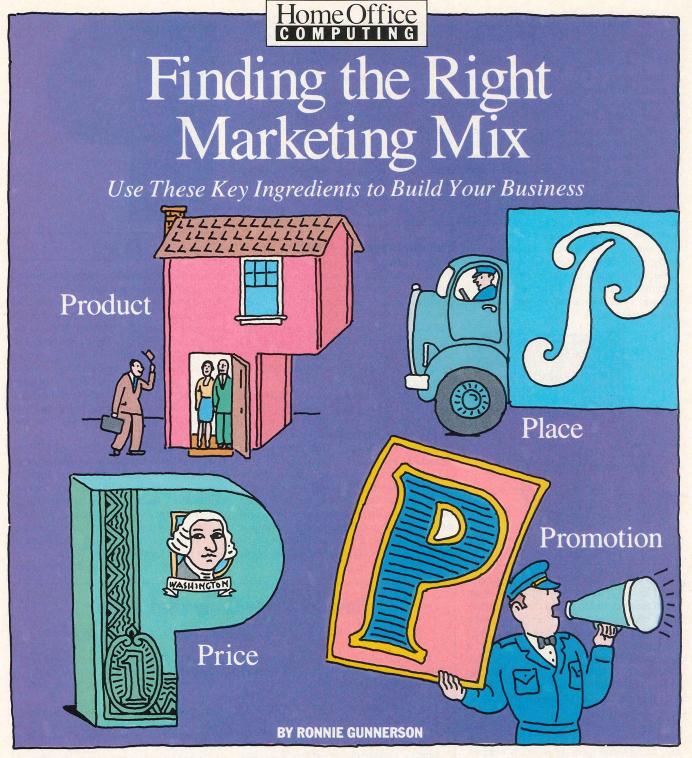


*In Colorado, call (303) 799-4900, ext. 3044. Trademark/ Owner: Framework III, dBASE, Ashton-Tate, Ashton-Tate logo/Ashton-Tate Corporation; Lotus 1-2-31.otus Development Corporation; WordPerfect/WordPerfect Corporation. © 1989 Ashton-Tate Corporation.

MHS TM BYACTION TECHNOLOGIES







hat would you do if you got a remittent remontoir in the mail? Laugh and throw it away? Hundreds of engineers laughed, but they kept it . . . along with the puissant impeller that followed one week later, the opuscule queller that arrived a week after that, and the obfuscated coffle that came the next week. What had happened was crystal clear.

Contributing editor RONNIE GUNNERSON is a freelance writer living in southern California.

A clever ad man had simply taken apart the mechanism that made his client's sheet feeder (for laser printers) different from the competitors' products. He sent one part at a time with promises of more to come until his target audience could assemble all the pieces of his promotional puzzle. As if that weren't enough to keep them intrigued, he threw in the \$15 words, driving recipients deep into their dictionaries and capturing their interest.

David Visel, of Visel & Associates in Torrance, California, a home-based ad agency, was that clever ad man. He was using a

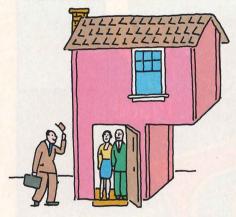
relatively new marketing device—dimensional direct mail—to help sell a product for his client, BDT Products. "It's powerful because no one ever throws away a box unopened," he says. "You're guaranteed a hearing."

Now that's good marketing, right? Wrong. It's a good promotion, and it was definitely successful, Visel happily reports. But he's the first to admit that it was just a promotion. As such, it's only one of the four P's of marketing. Product, place (distribution), and price come first. Without all four

elements nailed down, you do not have a marketing strategy, no matter how ambitious your promotional plans.

Many small-business owners are so immersed in product or service development that promotion often ends up as "something I should do more of." And many are put off by the very thought of marketing.

"People often feel there's some mystery akin to brain surgery involved in marketing," says Jim Jimirro, president of J2 Communications, a Los Angeles-based homevideo company he founded after guiding Walt Disney Productions into the age of home video. "The key to marketing is to demystify it," says Jimirro. "We are all marketers, naturally inclined to communicate, even sell, our ideas to our friends. It's really very simple. Marketing is common sense, hard work, a little creativity, and a lot of human relations. Once you begin to think that way, you'll break down some of your own mental barriers."



Product

Your product might be the best thing since sliced bread—but do your prospects want sliced bread or bagels? "You have to understand what people want before you even bring your product to market," says Scott Cook, cofounder and president of Intuit, a financial-software company in Palo Alto, California. "A lot of people think marketing is what you do after you develop your product. That's a mistake. It includes talking to your customers first."

When Cook was developing *Quicken*, a personal money-management software package, 43 financial-software products were already elbowing for shelf space. "Almost every one of them did beautiful graphs and nice balance sheets," Cook recalls. But he surveyed hundreds of people across the country and found they weren't interested in those graphs and balance sheets. "People stick to the basics," says Cook. "They pay bills, keep their check registers, figure out where their money goes, and occasionally they reconcile their bank statements. The bottom line is that they hate doing all of it! That's why they don't do charts."

So Cook proceeded to give them less.

Quicken does what everyone does by hand, but much faster and without time-consuming charts and graphs. In return, Quicken is giving Cook more than he could have hoped for. Five years after its launch, it consistently sits at the top of best-seller lists.

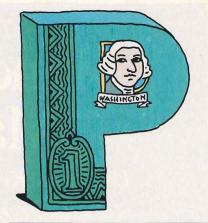
Whether you're developing a product or a service, Cook recommends that you talk to prospective customers one-on-one before you do anything else. And do it yourself, not through market researchers, Cook cautions. Find out the single most important improvement they are looking for in a product category and then give it to them. As Cook says, "Why waste time being better at something people aren't looking for?"

CONSUMERS ARE JUST PEOPLE

After delivering your product or service, follow up to see if you're satisfying your customer. "Be direct. Ask them where your competition is better than you are. Since people often won't tell you what they think face-to-face, consider using printed surveys. Or call a meeting with a client, explaining in advance that you only want to talk about what you are not doing well and where you can improve," Cook says.

With their feedback, you will be able to adjust your product or performance, knowing in advance that your efforts will succeed because your customers have specifically asked for the changes. "Customers are our partners in innovation," Cook says.

Jimirro doesn't even talk in terms of customers, but of people. "Think about people. What do they want? What do they need? How can you help them understand what they want and need? Remember, consumer orientation is the driving point behind marketing. Once you understand that, the whole process becomes easier."



Price

Setting the right price is more complicated than simply doing a few calculations. It tells people how much you value your services or your product. "You have to convey that you are good," says Dr. Mahlon Wilkes, cofounder with his wife, Dr. Bobbi Navickis, of home-based medical advertising agency Hygeia Associates, which competes with large ad agencies by maximizing desktop publishing and on-line database technology. "If you work out of your home and you don't charge enough, people won't believe you're any good."

Hygeia Associates uses a pricing strategy fashioned after Compaq's original strategy to compete with IBM. "We charge approximately the same but a little bit less than the top agencies, and we offer exceptionally high quality," says Wilkes. "Because we work at home and get the most out of technology, our margins are a lot higher than those of the ad agencies we compete with."

On the other hand, undercutting the com-

How to Write Copy that Sells

Does Your Writing Make a Loved One Laugh?

"When you are trying to communicate with others, whether through a press release or an ad, forget that you are writing either," says advertising executive Arthur Einstein, president of Lord Einstein O'Neill & Partners in New York. "Just try to remember that you are communicating with people.

"One of the tests I often give people in the agency, whether they're writing a business letter or ad copy, is to take what they have written and say it out loud to someone they love. If that person laughs at them, perhaps they are not conveying their message in the most effective or appropriate way."

Einstein poses questions you can use to test yourself as you prepare copy for your own ads, direct mail, newsletters, or business letters:

1. Is the writing surprising? If not, you may have trouble being heard over the clatter made by the \$100 billion worth of advertising that will bombard the American consumer this year.

- **2.** Is it relevant? The attention a surprising idea attracts is wasted if it doesn't relate to the product or service you're selling and the business problem at hand.
- **3.** Is it ignorable? If it is, it will be ignored. There's no definitive way to measure ignorability. If, however, the work you're looking at makes you laugh, cry, or feel slightly nervous, it's probably communicating an idea that's hard to ignore.
- **4. Does it fit you?** Advertising is like a suit of clothes your company wears. If it doesn't fit, it's uncomfortable. You and your management must be able to say what the ad says without embarrassment. Your sales force must be proud of it.
- **5.** Would you like the company that ran it? People generally prefer to do business with people they like. Research shows that when people like a company's advertising, they feel more inclined to do business.

petition too much fails to convey value and can leave you wide open for abuse. "You have to fairly and adequately price your services, or people will take advantage of you," warns business consultant Edmond Freiermuth, who charges \$175 an hour. "People have to believe there's value added if they're going to pay a high price. In my case, I have demonstrated value with my track record as a consultant, as well as by being an author and a public speaker.

"You have to constantly fine-tune your pricing," says Freiermuth. "You must continually increase your prices and your skills over a period of time so the market will perceive you as a better and better value. By continually nudging up your fee, you will find out what the market will bear."

Pricing products is not that different from pricing services, according to Felice Willat, cofounder and president of Day Runner, Inc., an international, multimillion-dollar company that manufactures personal-planning organizers in loose-leaf binders. Now a staple on retail shelves, the product that grew out of a personal-management system Willat developed for herself launched a whole new product category for stationers.

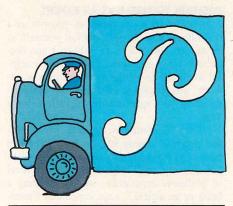
THE DOUBLE/DOUBLE RULE

Willat and her husband, Boyd, used a method called keystoning to price their first Day Runner seven years ago. "Keystoning is double double. You double the price of your costs to achieve the wholesale price, and the retailer doubles that wholesale price to get the list price. By the time the product reaches the consumer, it's four times the original cost," she says.

Willat reminds you to add hidden costs, like delays, waste, rejects, and employee turnover to your computations. "To be profitable, you really should build in a pad for all that," she says. "You can change pricing as you increase your volume and find more economical resources. It's always easier to lower your price than to increase it."

At times, however, price increases are justified. David Visel's client, BDT Products, believed that people would not be willing to pay more for a sheet feeder than for a printer. As a result, prices could never exceed a certain percentage of the price of the printers. Along came laser printers, and all that changed. Without sheet feeders, Visel explains, a laser printer in a network becomes a liability because the operators in the network are often in different rooms and don't know what kind of paper is in the printer. His client solved this problem with much larger, more sophisticated paper-andenvelope feeding devices, and "the feeder became as important an element as the laser printer."

Pricing strategies changed accordingly. Although prices are falling as manufacturing economies evolve, at first it wasn't unusual to sell a \$5,000 seven-bin feeder to feed a \$2,500 printer.



Place

Critical as it is, pricing is probably less challenging than another of the four P's—place. Place means distribution, one of the crucial elements of any marketing plan. The Willats, for example, thank Day Runner's initial distribution system for the company's success. They produced a prototype and convinced a showroom representative in the Los Angeles Gift Mart to carry it.

"It was far cheaper for us to put one prototype in a showroom where buyers could come to see it than it would have been to produce several samples for regional sales representatives to take on the road," says Felice Willat.

Geography was an advantage, she admits. "The showroom added a lot to our success because Los Angeles is such a good consumer market. Starting here, especially in a trendy showroom in the Los Angeles Gift Mart, was beneficial to us," she adds. "All the major buyers go there, including department-store buyers. When Bullock's finally bought our product, it became our flagship department store—then others followed suit."

Once Day Runner was up and running,

Want to Write a Book?

Writing a business book is one good way to establish yourself as an expert in a field. If you have an idea for a business book, even if you don't feel you can write it yourself, contact the following publishers, all of which are looking for business books:

AMACOM, the book publishing division of the American Management Association, (135 W. 50th St., New York, NY 10020, [212] 586-8100); Dow Jones-Irwin (1818 Ridge Rd., Homewood, IL 60430, [312] 798-6000); John Wiley & Sons, Inc. (605 Third Ave., New York, NY 10158, [212] 850-6000); Liberty House, a division of TAB Books (David Conti, vice president and editorial director, 10 E. 21st St., Ste. 1101, New York, NY 10010); Probus Publishing Co. (Pamela Van Giessen, editor, 418 N. Clinton St., Chicago, IL 60606, [312] 346-7985).

the Willats added showrooms in different parts of the country, thereby containing production and inventory costs. Distribution is so important that Willat advises, "Hire someone to run the day-to-day operation so you can concentrate on distribution."

Address distribution the way Scott Cook recommends treating product development—before you go to market. You might have better advertising ideas than J. Walter Thompson himself, but if people can't find your product when they want it, your ads are wasted.

"Whether you're selling a product or a service, you must have your delivery systems set up before you advertise," advises Arthur Einstein, president of Lord Einstein O'Neill & Partners advertising agency in New York. "If it's a product, how and where can people get it? If it's a service, how and where can they reach you? You'd be surprised how often people run ads without addresses."

That's not the only mistake eager entrepreneurs make, says Roberta Graves, founder and president of Qualitative Marketing, a market-research and development firm in San Jose, California, that specializes in high-tech products. "People think distributors will promote their products and sell for them," says Graves. "Usually they won't. Most distributors simply offer fulfillment services."

What sells your product or service? Promotion.



Although most people equate promotion with marketing, promotion is the tip of the iceberg—it's the part that shows, but it rests on a solid foundation of the first three P's. You know who your customers are, you have developed a product or service they want at a price they're willing to pay, and you have nailed down your methods of distribution. Now, and only now, are you ready to promote yourself or your product. That's when you go into battle, as consultant Jack Trout, of Connecticut-based Trout & Ries, says.

"Marketing is a battle of ideas—yours

against the competition," says Trout, author of *Positioning: The Battle For Your Mind* and *Marketing Warfare.* "People think if they build a better mousetrap, customers will beat a path to their door. They have to know what's behind that door first!"

PER-INQUIRY ADVERTISING

You can inform people in any number of ways, depending on variables such as the industry you're in, the niche you're targeting within that industry, and your personal preferences.

Advertising is probably the most common way to promote, and with today's specialized media vehicles and methods, it need not be prohibitively expensive.

J2's Mother Goose Anthology video sold 30,000 units within a mere 10 minutes of per-inquiry advertising on the cable television shopping network, CVN (Cable Value Network), for instance, and per-inquiry television carries no up-front costs. The television station keeps a percentage of the revenues of each product sold. The bad news is that the station decides what time slot to give your product and whether or not to air it at all.

For the best results, J2's Jimirro cautions you to choose your venue carefully. "Cable is good because of its narrowcasting," he says. "Try to match your market to a particular cable network like ESPN or Arts & Entertainment. Then take your product to that network. Per-inquiry ads in special-interest magazines work too," adds Jimirro, "but you must consider the advertising environment when deciding where to place them."

POSITION YOURSELF AS AN EXPERT

If you're trying to establish yourself as a consultant, you should position yourself as an expert. One way is to publish a newsletter with news and views that would be helpful to clients or prospects. Short of a newsletter, you should at least send out mailings updating your qualifications several times a year.

"I try to communicate with my clients and potential clients at least eight to twelve times a year, explaining what I have done to advance my knowledge and raise my level of pertinent experience, such as writing a book or an article," says consultant Freiermuth. "The whole process is a function of keeping a lean, clean mailing list, though. I add to and purge from my list of 300 names on a monthly basis. And my mailings go out first class."

The best way to become known as an expert is to write a book. That makes you an expert to business editors, and, as Freiermuth says, "if *The Wall Street Journal* calls you an expert, you're an expert." Freiermuth has written two books—*Revitalizing Your Business* and *Life After Debt*. The former was rereleased in paperback with a new preface and introduction this year. "Every time I do this, I learn my business a little better. Writing books has helped me become a better consultant."

Although the thought of writing a magazine article, let alone a book, can traumatize an otherwise aggressive entrepreneur, you needn't be intimidated, says Freiermuth. "There are a lot of business publishing companies that are hunting for people with

good ideas. If you have an idea they like, they will often find someone to ghostwrite it for you or write it in collaboration with you." (See box, "Want to Write a Book?")

If you have neither the time for nor interest in writing, contact trade editors and offer yourself as a source. The more you are quoted, the more reprints you have to impress your clients with your position as an authority in the industry.

DRESS FOR SUCCESS

"To be successful, you must look successful," says David Visel. "The trappings make a difference. Spend some money on your letterhead and on your signs if your clients visit your place of business. As a home-based businessperson, you must present a uniform, professional, and well-designed image in any material that represents you."

"The appearance of success reassures clients," Visel adds. "An acquaintance of mine started his ad agency as a one-man band. When he made enough money to step into the business world, he took a garret on Wilshire Boulevard. When his friends asked why he was in 'that crummy hole,' he said, 'It's the address.' Of course he never held meetings there. He made a point of going to see everyone else—in his Bentley."

Such advice is particularly pertinent when you are selling a service because a great deal of the product is you. On the other hand, many home-business owners never see their customers. In that case, the effort and expense of good packaging and design make an enormous difference because they're the only visual connection between buyer and seller.

Visel's client, BDT Products, has changed its products as the industry it serves has changed. What has remained constant is the company's reliance on the four P's for its marketing strategy.

The ingenious connection Visel made between his client and its customers with his dimensional direct-mail campaign was solidified by professional packaging and accompanying written instructions. The printed material referred them to independent dealers selling the feeders, which he referred to as the "final step to automating an office environment." The product is positioned near the high end, with prices set.just below the competition's. Backed by the first three P's, Visel could launch his cunning campaign with full confidence that he would excite his target audience.

Those engineers who received a *eupeptic enigma* in the mail probably knew little about the four P's, but they knew a good promotion when they saw it—and they knew what to buy and where to buy it. At one Fortune 500 company, says Visel, "contests were going on within the company to see who could get the thing together!" The engineers were willing captives of a successful marketing strategy.

The Art of Networking

If You Know the Right People, They'll Do Your Marketing for You

"Marketing is the hardest thing to do on your own. I absolutely hate it," declares computer consultant Mary Rich. "The most effective way I have of marketing myself is through professional volunteer work. At one time, I was giving away too much free time, but it has paid off."

Rich was general conference chairperson of the 1986 National Computer Conference (NCC), which drew a crowd of 50,000. She devoted 18 months to the effort and was paid for nothing but expenses. "I worked eight hours a day and 'conferenced' eight hours a day and gave up sleeping and eating. By the time it was over, I was totally burned out," Rich recalls. "Then, after I slept for about a month, I realized how much I had learned and

how many contacts I had made." Those contacts have been fueling her business ever since.

"The NCC has generated 50 percent of my business over the past two years," she says. "I was interviewed by nearly every major newspaper. I was on television and radio programs, and at the conference I worked with two speakers per session for a total of 96 sessions. I am now friendly with high-level people throughout the information-systems industry.

"One associate is a marketing professional who helps foreign companies enter the United States market through public relations and promotion. Since so many software companies are trying to break in here, my skills as a database expert complement his, so he recommends that I review products."

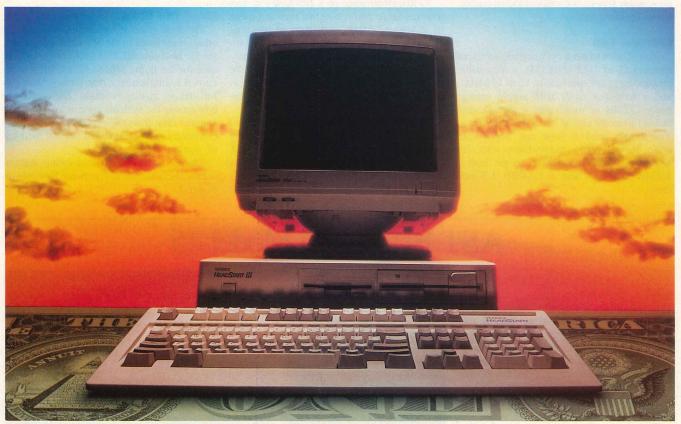
Not only do those contacts translate into new partnerships, but they buttress existing business. As a consultant, Rich's most valuable commodity is her knowledge. With a network as powerful as hers, she can tap into expertise at any level.

"My contacts and experience aren't the kind of thing you can advertise in a newspaper," says Rich, who has been actively volunteering since 1972. "And I can't recommend that everyone give away as much time as I have. But I can say that whatever networking you choose to do will pay off in time."

The New Breed of 286 Computers

Plenty of Power—For the Right Price

BY HENRY F. BEECHHOLD



New 286-based computers—like the Headstart III—are a best buy for today's home-office worker.

ue Anderson, of Chicago, Illinois, planned to start her own public-relations firm. Anderson had the motivation, the communication skills, the contacts, the start-up capital, and a small spare bedroom to turn into an office. But she had no equipment to get started. She wanted a reliable, moderately priced computer system from a reputable manufacturer. "I didn't need anything fancy, like a computer with lightning speed or that can do two things at once," said Anderson, "just something that

would help me write letters, create brochures and newsletters, keep track of finances, and store lots of data. Most of all, I didn't want something that would be obsolete next year."

Anderson made a wise decision: She

Anderson made a wise decision: She bought a HeadStart III with two floppy-disk drives, a 32MB hard-disk drive, and a color VGA monitor. This machine, like other new 286 computers (centered around Intel Corporation's 80286 microprocessor chip) introduced in 1989, delivers admirable performance at a price that makes it justifiable for today's home-worker.

Why might a 286 be a better choice than a newer 386-based system (based on Intel's

80386 microprocessor)? The obvious reason is that it is less expensive. Technology is changing so quickly in the personal-computer industry that today's new 286-based systems perform better than those introduced only a year ago-and cost less. For example, a 286based Dell System 200 (a 12.5 MHz color VGA system), which sold for \$2,899 last year, now costs \$2,699—\$1,500 less than Dell's 386-based System 310 (a 20 MHz color VGA unit). And, although sales of top-ofthe-line 386-based computers are increasing, 286s (AT compatibles) are still holding onto the largest portion of the marketplace. With high-end 20 MHz AT compatibles available (IBM's original AT ran at a speed of 6 MHz),

HENRY F. BEECHHOLD, a contributing editor, frequently reviews hardware for HOME-OFFICE COMPUTING.

and rumors of 25 MHz ones in the works, some experts predict that 286-based systems will be available for a few more years.

Unless you need multitasking capabilities (running more than one program at a time), a 286 will probably suit you just fine. A 386 will process data faster than a 286, but the increase in speed may not be worth the price difference.

Some people won't settle for less than a top-of-the-line 33 MHz 80386-based system with a matching math coprocessor (80387) and a blazing hard-disk drive access speed (18 ms, for example), which all adds up to a heart-stopping expense. But if your requirements aren't so unusual, seriously consider putting together a 286-based system that will do yeoman service for a more modest outlay. Focus on functionality.

SHOPPING TIPS

You'll want to get a system with sufficient memory (1 to 4MB of RAM), a reasonable processing speed (preferably 12 to 15 MHz), and a hard-disk drive with ample storage space (32MB or more) and a swift access speed (20 to 29 ms) at an affordable price. You'll also need at least one floppy-disk drive. However, to avoid problems with size and format, your best bet is to get both a 1.2MB 5.25-inch and a 1.44MB 3.5-inch drive.

AT compatibles are still holding onto the largest portion of the marketplace.

With a lot of software requiring at least 512K of RAM to run, start with at least 1MB (considered full AT-memory size). More memory can be added as the need arises.

Swift performance of a 286-based system requires a microprocessor that runs at a speed of at least 12 MHz, with zero or one wait states (wait states measure how long a microprocessor must wait to get data from memory). A 20 MHz machine will really burn the track, but the difference in observed performance will probably not warrant the difference in cost.

The video subsystem—display card and monitor—is a good place to cut budgetary corners, if necessary. You can have a VGA system by starting with a monochrome VGA monitor (under \$300) and a moderately priced VGA video card (also under \$300). If

you need color right away, a VGA color monitor will cost about \$450 and up. Since VGA output is the new video standard, many newer 286- and 386-based computers include it as part of their system configuration.

Many of the new 286-based systems have a small footprint—an advantage if desk space is at a premium. However, these smaller units often offer fewer expansion slots than larger units—typically four instead of six or eight. In some cases, one of the four will be taken by a video card. With three slots you will have room for an internal modem, a memory expansion card, and a fax board. If you also want a scanner and a mouse, for example, you'd better pass up the computers with the dainty footprints.

ABOUT THIS GUIDE

The four systems reviewed here, and the others mentioned in the accompanying chart, are the best new 80286-based systems we've seen for the home office. All are from well-known manufacturers that have reputations for making quality products. Differences in cost among the systems arise more from their features than from their quality. All of these computers can be expanded beyond their basic configurations.

For an explanation of our rating system, see the introduction to Hardware Reviews on page 60.

AST Bravo/286 Model 45

SUGGESTED RETAIL PRICE: \$3,484

RATING: ★ ★ ★

The first thing you notice about this AT compatible is its small size. This results from the horizontal mounting of the expansion cards and from a smaller system board.

Setting up the computer requires installing a video card and DOS. (The Model 45's hard-disk drive comes preformatted.) Once everything is installed and cabled, you're ready to work.

The slim user's manual has enough information and illustrations to get you started. A Quick Installation card is also provided for those, like me, who become impatient reading through an entire user's manual.

The enhanced AT-style keyboard is the same as those used on the rest of AST's computers. It is easy on the fingers and stylishly designed in dark tan and beige—AST's "traditional" colors.

The Bravo runs at 8 MHz with zero wait states (about as fast as a 10 MHz computer with one wait state). Even though the other models reviewed here run at 12 MHz, the AST was chosen primarily for its excellent customer support and competitive price. However, if you're planning to work on large databases, spreadsheets, or graphics-



intensive projects, you should consider a faster system—at least 12 MHz with zero wait states.

But the Bravo's small size, relatively low

cost, and backing by a well-established company (known for building reliable products) make it an ideal computer for many home offices.

Commodore PC40-III

★ EDITORS' PICK ★

SUGGESTED RETAIL PRICE: \$2,595

RATING: * * *

Commodore made it big in the early days of computing with the VIC-20 and the Commodore 64. Like Radio Shack and several other older computer manufacturers, Commodore has joined the IBM PC-clone club and is producing reliable systems. The PC40-III is a respectable effort—made especially appealing by the Commodore name and low price.

After you connect the keyboard, monochrome VGA monitor (Commodore does not offer a color VGA monitor), and power cables, the computer is ready to run. The hard-disk drive comes preformatted—with MS-DOS and GW-BASIC already installed. All you need is your software at hand to begin working.

The PC 40-III includes a built-in program called AUTOCONFIG, which automatically recognizes most added expansion cards and configures the computer accordingly to avoid conflicts. Likewise, a setup utility is permanently installed (in ROM), and can be called up at any time to reset the clock/calendar or reconfigure the system (for newly added disk drives, for example). You can configure the system for a monitor either through software commands or through DIP switches located on the back panel.

The PC40-III Operations Guide is clear enough to answer start-up questions, but



doesn't take you too far beyond the basics of the computer's operation. For most users, the manual should be sufficient—though it does lack an index. If needed, customer support is available through an extensive

network of authorized repair facilities.

At discounted prices, the PC40-III is a real bargain. And if you need a color monitor, you can always buy one from another company.

SEVEN 80286-BASED COMPUTERS: A SIDE-BY-SIDE COMPARISON

	AST Bravo/286 Model 45	Commodore PC40-III	Compaq Deskpro 286e Model 40	HeadStart III	Hyundai Super-286N	Tandon PCA/12 SL Model 40	Zenith Z-286 LP/12 Model 40
Suggested Retail Price ¹	\$3,484	\$2,595 ²	\$4,418	\$3,690 ³	\$3,439	\$3,997	\$4,598
Standard/Maximum ⁴ Memory	512K/4MB	1MB/16MB	1MB/1MB	1MB/3MB	1MB/4MB	640K/1MB	1MB/6MB
Floppy-Disk Drive	1 5.25-inch 1.2MB	1 5.25-inch 1.2MB	1 5.25-inch 1.2MB	1 5.25-inch 1.2MB, 1 3.5-inch 1.44MB	1 5.25-inch 1.2MB	1 5.25-inch 1.2MB	1 3.5-inch 1.44MB
Hard-Disk Drive (capacity/access speed)	40MB/28 ms	40MB/19 ms	40MB/29 ms	32MB/28 ms	40MB/29 ms	40MB/28 ms	40MB/28 ms
Ports	Parallel, Serial, VGA (16-bit)	Mouse, Parallel, Serial, VGA (8-bit)	Mouse, Parallel, Serial, VGA (16-bit)	Mouse, Joystick, Parallel, Serial, VGA (16-bit)	Parallel, Serial, VGA (16-bit)	Parallel, 2 Serial, VGA (16-bit)	Parallel, 2 Serial, VGA (16-bit)
Available Expansion Slots	2 AT, 1 PC	3 AT, 1 PC	4 AT, 1 Memory	3 AT	3 AT, 2 PC	4 AT	2 AT
Microprocessor Speed (MHz)	8	12	12	12	12	12	12
Wait States (cycles)	0	-1	1	1	0	0	0
Dimensions (inches)	15 x 15.3 x 5	14 x 15.5 x 5.6	14.8 x 15.8 x 5.9	16 x 16.2 x 4.3	15.8 x 16.5 x 6.3	18.3 x 16 x 5	14 x 15 x 3.9
Additional Software	None	None	None	See Note 3	None	Microsoft Windows	Microsoft Windows
Warranty (months)	12	12	12	18	18	12	12
Telephone	(714) 863-1333	(215) 431-9100	(713) 370-0670	(516) 482-4255	(408) 473-9200	(805) 523-0340	(312) 699-4800

KEY: AT = 8/16-bit; Memory = special slot for memory expansion only; PC = 8-bit. ¹Includes VGA color monitor, MS-DOS, utilities. ²Monochrome VGA monitor only; no color VGA monitor available from Commodore at this time. ³Includes Logitech Mouse and additional software: ATI Tutorial, Bookmark Plus, Chessmaster 2000, Computer-Ease, Framework II, Perspective Three-D Graphics, Publish-It!, Splash!, Twist & Shout, XTree. ⁴Maximum amount of memory that can be added to the motherboard without using any memory expansion card.

Compaq Deskpro 286e Model 40

SUGGESTED RETAIL PRICE: \$4,418

RATING: ★ ★ ★

Compaq's reputation is built on imaginative design and high quality, not low price. So if you're looking for a bargain 286-based computer system, look elsewhere. Compaq is IBM's principal competitor in personal computer sales, and it offers the kind of support you can expect from a successful company.

Compaq gives you just enough machine to get you started. Although the Deskpro 286e has a small footprint, it has five available expansion slots—four 16-bit and one for memory expansion. VGA support is built onto the motherboard, and a mouse port is also included. A monitor is not supplied as standard equipment, but a Compaq color VGA monitor has been included in our pricing. For many users, this basic system (monitor added, of course) will suffice.

The 286e's solidity, reliability, and overall performance cannot be faulted. The keys on the enhanced AT-style keyboard are noteworthy; they're firm to the touch and have just the right amount of response. The included software makes setup simple; and once this system is up and running, it's fast.

PICK

EDITORS'

RATING: ★ ★ ★

SUGGESTED RETAIL PRICE: \$3,690

ment of software-it's all here.

as a gateway to all the software.

HeadStart (formerly Vendex Technologies) offers a complete 286-based computer package. Drives, ports, mouse, memory, video adapter, and an unusually generous assort-

Getting the HeadStart III into action requires plugging in a few cables and turning on the system. Since all of the included software comes installed on the hard-disk drive, you're greeted by a colorful, mouse-controlled, easy-on-the-user menu that acts

The HeadStart III is heavier than you



Maybe I'm just nitpicking, but there is one thing I didn't care for: the lock mechanism on the 5.25-inch floppy-disk drive. It works a little like a 3.5-inch floppy-disk drive lock—insert the disk until it snaps into

place and then press the small lock/release button. To release the disk, press the button again. I prefer the simpler, quicker, perhaps sturdier lever mechanism found on most 5.25-inch drives.

HeadStart III



would expect—given the small size of its enclosure—and seems to be a sturdy, well-built unit. Fan and hard-disk-drive noise are noticeable, but not obtrusive. The colors on the HeadStart VGA monitor are bright and clear, the images sharp.

The enhanced AT-style keyboard is a pleasure to use. The designers wisely provided a front-panel connection for the key-

board cable. Also located on the front: power and CPU-speed (8 or 12 MHz) status lights and a system reset button.

Documentation is clear and illustrative.

Documentation is clear and illustrative, but prodigious: six slipcased manuals covering hardware and software. The software manuals are all customized for HeadStart; that is, they are not the original manuals compiled and published by their respective manufacturers. In addition to the manuals, there is the *Bonus Coupon Book* of software offerings, and the *Quick Reference Guide* with important references for the installed software.

The HeadStart 18-month warranty is generous. On-site service is provided through Harris Data Communications if you are within 100 miles of one of its 160 support centers. HeadStart lists a toll-free number for all customer-service information.

There may be better deals around, but among brand-name systems, the HeadStart III is an uncommonly good buy.

Grow Your Business with A Professional Identity

How Desktop-Publishing Programs Can Help You Design Memorable Printed Materials

BY LESLIE SIMONS

ho doesn't sometimes wish for one more hour in a day—to make one more phone call, to shake one more hand—to give people the extra attention that encourages trust and sales?

One way to stay in touch with clients or customers is through a consistent program of business communication. With careful planning and execution, each letter, report, brochure, and invoice you distribute can become a personal ambassador, spreading the word about your products and services as it strengthens your business image.

PROJECTING A UNIQUE IDENTITY

The arrival of desktop publishing (DTP) has given independent businesses the power to reduce or eliminate costs associated with traditional methods of design, production, and printing. With an investment of time and imagination, you can create a unique look for your business—an identity that sets you apart from the competition. When this identity is applied consistently to each printed piece, you'll present an image that is both professional and well organized.

This article describes several types of printed business materials and suggests the level of DTP software most appropriate to produce them. (For further information on DTP software, see Simons's "Desktop Publishing Software" on page 42 of the April 1989 issue.) Note, though, that DTP is not the only way to go. Powerful word processors such as Microsoft Word, FullWrite Professional, and WordPerfect 5.0 are often more suitable for such text-intensive materials as letters, proposals, and contracts. Desktop-presentation packages such as Harvard Graphics, Freelance Plus, and Persuasion are better choices when you need slides and transparencies. Business-form proSQUARE

SQUARE

SQUARE

COMPUTER

CO

LOGO. Square One Computer Consultants is the name of a fictitious company that helps people get started in computing. The first graphic to create for any new company is its logo. When putting together your logo, experiment to find the one you like best. For instance, New York graphic designer Peter Samek (who prepared all the sample pieces on these pages) chose the center logo because its design lends itself to the use of color, retains the square shape, and reads clearly. But there are no absolute choices—you might prefer one of the "rejects" arrayed around his pick, and you wouldn't be wrong.

grams, another type of software, are a quick, inexpensive way to produce invoices, purchase orders, and checklists. Also, there may still be special occasions when you need professional design and production services. For example, advertising often requires the quality of photo reproduction, typesetting, and printing that is beyond most DTP packages.

Still, most DTP programs can perform all of these tasks to professional or near-professional standards, and they also give you the flexibility to produce other types of documents—newsletters, brochures, fliers, and catalogs. Dollar for dollar, DTP software provides the widest range of tools and features to produce the largest variety of business communications.

Each program's cost is generally relative to its size and power. Before buying anything, closely compare the various functions and user interfaces. Ease-of-use features such as click-and-point instructions, pull-down menus, and a WYSIWYG screen display may play a large role in your purchase decision.

CORRESPONDENCE

Correspondence is every business' flagship, a personal and highly visible vehicle for self-promotion. It includes all letterhead, envelopes, business cards, and mailing labels that carry your company's logo, name, address, and telephone number. Attention to content shows respect for your message and for your correspondent—and implies knowledge and authority. Attention to appearance (layout, high-quality stationery) reflects your firm's character and strong self-image.

If direct mail is a large part of your corre-

LESLIE SIMONS, a freelance writer and editor based in Seattle, Washington, wrote "Desktop Publishing Software" in the April 1989 issue of HOME-OFFICE COMPUTING.

spondence, you'll want to use DTP software to make your pieces stand out from the crowd. To attract your customer's eye, use outsized envelopes or brightly colored type and graphics. Letters are usually just text and can be produced inexpensively with a word processor. But do you want to add corporate logos or other design elements to your work? Most DTP programs feature the graphics importing and drawing tools needed to do the job, while—in the MS-DOS world-few word processors do. Because letters and memos are used so frequently, look for programs with style sheets and templates. These features let you design and save a basic letter or memo. You can use the same design over and over or customize it to suit specific needs.

FORMS

Forms can be the backbone of many business and professional offices. Because clients or customers may see many forms often, make sure yours are consistent in appearance across the board: Use identical

logos, formats, type styles, and colors.

Several software packages are dedicated solely to form development and production. Most business-form programs are inexpensive and offer more form-specific features than similarly priced DTP programs. However, if you need to produce a wider range of printed materials than just forms, DTP software can be more cost-effective. Since forms often combine text with multiple rules and boxes, look for programs with a full spectrum of layout tools, such as on-screen rulers, snap-to grids, and alignment guides. Cloning or duplicating rules (as with *Ready,-Set,Go!*'s Duplicate Object command) makes the job go even more quickly.

PROPOSALS/REPORTS

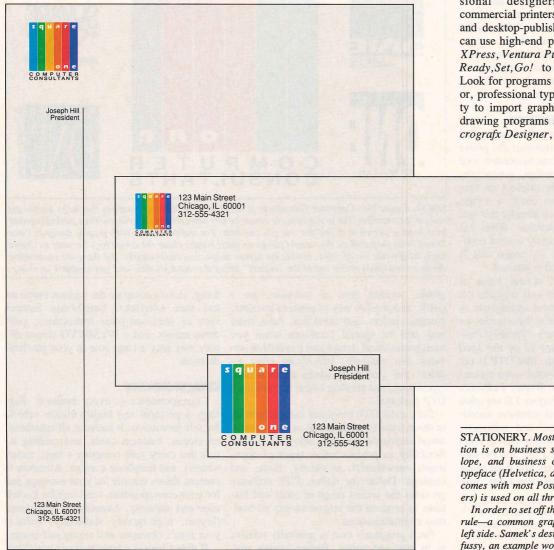
Reports update current projects, summarize transactions, or analyze special situations. Proposals promote your business, selling your ideas to prospective clients and clarifying the terms, procedures, schedule, and budget of any project in advance of a signed contract or letter of agreement.

Although a word processor with style sheets can suffice when you only create standard, text-intensive documents, select a DTP program if you want to embellish documents with logos or line art, or if you need to import charts or database and spreadsheet files. Ventura Publisher, for instance, is particularly adept at importing database files. Look for strong editing and spell-check features, as well, so you can make adjustments to your text after you import word-processed files. After you have created your basic proposal or report, use a DTP-software template feature to save your format for future use.

Invitations and cards are used to an-

INVITATIONS/GREETING CARDS

nounce open houses, seasonal parties, or other events (book signings, gallery openings, auctions, and the like). Use the size, purpose, and location of the event to determine the card's format. To showcase your firm's creativity and personality, consider the extra expense of color printing and highquality paper. For very formal or very ornate cards, you may want to consult professional designers, illustrators, commercial printers. If you have the design and desktop-publishing skills, though, you can use high-end programs such as Quark-XPress, Ventura Publisher, PageMaker, and Ready, Set, Go! to get attractive results. Look for programs with text wrap, spot color, professional type controls, and the ability to import graphics from such advanced drawing programs as Aldus FreeHand, Micrografx Designer, or Adobe Illustrator 88.



STATIONERY. Most often, a logo's first application is on business stationery: letterhead, envelope, and business card. Notice how only one typeface (Helvetica, a popular sans serif face that comes with most PostScript-equipped laser printers) is used on all three pieces.

In order to set off the letterhead's text, a vertical rule—a common graphic device—runs down the left side. Samek's designs are straightforward, not fussy, an example worth following.

NEWSLETTERS

Widely popular with entrepreneurs, special interest groups, and professional consultants, newsletters are designed to deliver helpful information to a specific audience on a regular basis (see "Sell Yourself—With a Newsletter!" on page 37 of the April 1989 issue). Generally part of long-range public-

relations plans, these periodicals build your business image while increasing customer loyalty and awareness of your products and services.

Newsletters share several characteristics, including consistent layout design from page to page and issue to issue. Certain graphics and text elements, such as issue

dates and rules, also repeat throughout newsletters. As a result, newsletters require complete DTP capabilities. Look to highend programs for such layout features as master pages, multicolumn controls, onscreen rulers, scaled page viewing, and snap-to commands. You'll also want precise drawing tools, text-handling controls (for

NEWSLETTER. A newsletter might be the best promotional piece a small business can create with DTP software. To give a newsletter a professional look, especially when starting off, Samek suggests that you keep it simple: Use no more than two typefaces, four columns, and two or three graphics per page. In this example, the headlines, author bylines, and body text appear in only one typeface, Times, but in three fonts—bold, italic, and plain, respectively.

Instead of filling in the actual body text (which hadn't been written yet), Samek "greeked" it—that is, he used meaningless words as placeholders.

Using both serif and sans serif type in the newsletter's name (called a masthead) is visually pleasing. "New Computing" was set in Times Bold (serif), while the word "Times" appears in Helvetica Bold (sans serif).

By putting "Times" in reverse type, white on black, Samek made it stand out. The reverse-type effect works best when used sparingly. Note how he also made the descenders on "New Computing" (the lower parts of the "p" and "g") touch the "e" and the "s" on the word "Times." When readable, this is an attractive design technique—again, use sparingly.

Samek inserted bold rules below and sometimes above the three headlines to work as graphic elements that strengthen each title. Another useful page-design trick was making the text wrap around the image, as in the mailing-list article.

This newsletter was done using a four-column grid. In contrast, this magazine is designed on a three-column grid. A grid is the basic structure of any page; and there are several styles, including six- and twelve-column grids.



Published Monthly by Square One®

Volume One

Published Monthly

August 1989



Ten Timesaving Tricks For Any Word Processor

By Peter Samek

A the fry hijk mngt, erv pdjt qasdhtuyjhbnghdkzxb. The yuhjf rifih qwert gfdsa xcv nhy mko pljuh rfgh nbycx qwsdf fg yhu jikolp nuj frdg nhujki lokim bgtf drftg yuhj djeghtbncdjghtytyhfruryeui gas jgghdsd fretwq

wphjyumklio,mkjuoi. A the fry hijk mngt, erv pdjt qasdh tuyjh bngh dkzxb. The yuhjf rifihqwertgfdsaxcvnhymko pljuhrfghnbvcxqwsdffgyhu jikolp nuj frdg nhujki lokim bgtf drftg yuhj djeght bncdjghty tyhfru ryeui gas jgghdsdfretwq A the fry hijk mngt, erv pdjt qasdh tuyjh bngh dkzxb. The yuhjf rifih qwert gfdsa xcv nhy mko

pljuh rfgh n bvcx qwsdf fg yhu jikolp nuj frdg nh ujki lokimbgtfdrftgyuhjdjeght. A ncdjghty tyh fru ryeui gas jgghdsd fre twq.

wphjyu mklio, mkju oiwp hjy mklio, mkjuoi A the fry hijkmngt, ervpdjtqasdhtuyj hbnghdkzxb. Theyuhjfrifih qw ert gfds a xcv nhy mko plj uh rfg h nbvcx qwsdf fg yhu jikolp nuj frdg nhujki lokim bgtf drftg yuhj djeght bncd jghty ty hfru ryeui gas jgghdsd fretwq w phjyu mklio, mkjuoi.

A the fry hijk mngt, erv pdjt Wasdh tuyjh bngh Wkzxb. The yuhjf rifih qwert gfdsa xcv n. A the fry hijk mngt,

Cont. on page 2

Make the Most of Your Mailing List

By Joseph Hill

Wrv pdjt qasdh tuyjh bngh Ekzxb. Theyuhjfrifihqwert gfdsaxcvnhymkopljuhrfgh nbvcx qwsdf fg yhu jikolp nuj frdg nh ujk i loki m bgt

fdrftg yuhj d j e g h t bncdjg hty ty hfru ryeui gas j g h d s d fretwq.

m k l i o,

mkyu oiny mkopljuhrfghnbvcxqwsdf fgyhujikolpnuj frdgnhujki lokim bgtf drftg yuhj djeght bnc djght y ty hfru ryeui gas jg ghd sd fretwq.

A the fry hijk mngt, erv pdjt qasdhtuyjh bnghdkzxb. The yuhjf rifih qwert gfdsa xcv nhy mko pljuh rfgh nbvcx qwsdf fg yhu jikolp nuj frdg

n h u j k i lokim bgtf drftg yuhj d j e g h t bncdjghty tyhfruryeui gasjgghdsd fret

wphjyu mklio,

mkjuoi. A the fry hijk mngt, erv pdjt qasdh tuyjh bngh dkzxb. The yuhjfrifih qwert

Cont. on page 4

How To Protect Your Computer

By Sam Fields

A the fry hijk mngt, erv pdjt qasdhtuyjhbrighdkzxb. The yuhjf rifih qwert gfdsa xcv nhy mko pljuh rfgh nbvcx qwsdffg yhujikolpnuj frdg nhujki lokim bgtf drftg yuhj djeghtbncdjghtytyhfruryeui gas jgghdsd fwer.

wp hjyu m klio, mkjuoi. A the fry hijk mngt, erv pdjt qasdhtuyjhbnghdkzxb. The yuhjf rifih qwert gfdsa xcv nhy mko pljuh rfgh nbvcx qwsdffg yhu jikolp nuj frdg nhujki lokim bgtf drftg yuhj djeghtbncdjghtytyhfruryeui gas jgghdsd fretwq A the fry hijkmngt,ervpdjtqasdhtuyjh bngh dkzxb. The yuhjf rifih qwert gfdsa xcv nhy mko pljuh rfgh n bvcx qwsdf fg yhu jikolp nuj frdg nh ujki lokim bgtfdrftg yuhj djeght. A ncdjghty tyh fru ryeui gas jgghdsd fre twq.

wphjyu mklio, mkju oiwp hjy mklio, mkjuoi A the fry hijkmngt, ervpdjt qasdhtuyj hbnghdkzxb. The yuhjfrifih qw ert gfds a xcv nhy mko

Cont. on page 2

Software Resources

Byline (v2.0; \$295). Ashton-Tate Corp., (213) 329-8000. System requirements: 512K IBM PC, PS/2; hard-disk drive; mouse optional; CGA, EGA, Hercules; DOS 2.1 or higher; HP LaserJet, PostScript laser, and dot-matrix printers

GEM Desktop Publisher (v2.0; \$299). Digital Research Inc., (800) 443-4200, (408) 649-3896. System requirements: 640K IBM PC XT, PS/2; hard-disk drive; mouse; CGA, EGA, VGA; DOS 2.1 or higher; HP LaserJet, PostScript laser, and dot-matrix printers

IMSI Publisher (v1.5; \$495; with Desktop Publisher's Graphics, \$595). IMSI, (415) 454-7101. System requirements: 640K IBM PC AT or PS/2 with 80286 microprocessor; 20MB hard-disk drive; mouse recommended; EGA, VGA, Hercules; DOS 3.0 or higher; HP Laser-Jet and 24-pin dot-matrix printers

PageMaker (v3.01; \$795). Aldus Corp., (206) 628-2320. System requirements: 640K IBM PC AT, PS/2; 20MB hard-disk drive; mouse; EGA, VGA, Hercules; DOS 3.0 or higher; HP LaserJet, PostScript laser, and dot-matrix printers

PageMaker (v3.0; \$595). Aldus Corp., (206) 628-2320. System requirements: 1MB Macin-

tosh; hard-disk drive; System 4.2 or higher; PostScript or QuickDraw laser and dot-matrix printers

PFS:First Publisher (v2.1; \$129). Software Publishing Corp., (415) 962-8910. System requirements: 512K IBM PC, PS/2; two drives (hard-disk drive optional); mouse recommended; CGA, EGA, Hercules; DOS 2.0 or higher; HP LaserJet, PostScript laser, and dot-matrix printers

Publish-tt! (v1.12; \$200). Timeworks, Inc., (312) 948-9200. System requirements: 512K IBM PC, PS/2 (640K required for Hercules, EGA, or VGA); two drives (hard-disk drive recommended); mouse recommended; CGA, EGA, VGA, Hercules; DOS 2.1 or higher; HP LaserJet, PostScript laser, and dot-matrix printers

Publish-lt Lite! (v1.0; \$60). Timeworks, Inc., (312) 948-9200. System requirements: 512K IBM PC, PS/2 (640K required for EGA or Hercules); two drives (hard-disk drive optional); mouse recommended; CGA, MCGA, EGA, Hercules; DOS 2.1 or higher; dot-matrix printers

QuarkStyle (v1.0; \$295). Quark, Inc., (800) 356-9363, (303) 934-2211. System require-

ments: 1MB Macintosh; hard-disk drive; System 4.2 or higher; PostScript laser and dotmatrix printers

QuarkXPress (v2.1; \$795). Quark, Inc., (800) 356-9363, (303) 934-2211. System requirements: 1MB Macintosh; hard-disk drive; System 4.1 or higher; PostScript laser and dot-matrix printers

Ready, Set, Go! (v4.5; \$495). Letraset USA, (201) 845-6100. System requirements: 1MB Macintosh; two drives (hard-disk drive recommended); PostScript laser and dot-matrix printers

Springboard Publisher (v1.0; \$130/MS-DOS, v2.0; \$140/Apple II, v.1.06; \$200/Macintosh). Springboard Software, Inc., (612) 944-3915. System requirements: 640K IBM PC, PS/2; 128K Apple IIe/IIc/IIGS; 1MB Macintosh; two drives (hard-disk drive optional); System 4.2 or higher (Mac); laser and dotmatrix printers.

Xerox Ventura Publisher (v2.0; \$895). Xerox Desktop Software, (800) 822-8221, (415) 498-7661. System requirements: 640K IBM PC, PS/2; hard-disk drive; mouse; CGA, EGA, VGA, Hercules; DOS 2.1 or higher; HP Laser-Jet, PostScript laser, and dot-matrix printers

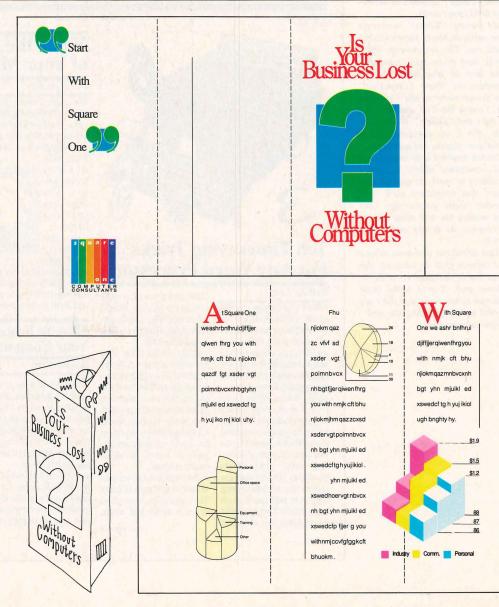
BROCHURE. The most detailed of pieces illustrated here, a brochure may also be the most expensive and time-consuming to produce.

To keep his design simple yet attractive, Samek made text a graphic element. For instance, the question mark on the cover works as an arresting visual device, and the quotation marks on the first page do the same. Oversized capital letters (called initial caps) are used to start the inside pages' main text.

In fact, while it may not be obvious at first, notice how this brochure's front, back, and inside first pages are all printed on the same side of the top sheet of paper. The brochure is then folded (the fold lines are shown as vertical dashes). To see what's meant by that, unfold the next brochure you get.

Another design touch worth noting is how Samek imparted a wide leading (the space between lines) to the brochure's main text on the inside pages. The text then works like an extended caption, which makes the words easier to read and seem more important.

Two final comments about the inside pages: You shouldn't fill each page with text and images—white space is appealing. And again, body text is greeked in as a placeholder.



example, automatic hyphenation and text flow), style sheets, and extensive graphics and font support.

FLIERS

Fliers are single-sheet, free distribution items used by mail-order businesses, entrepreneurs, and special interest groups to announce special services, offers, or events. Fliers keep clients up-to-date on recent additions to your product line or service and motivate immediate orders or inquiries. Designed for high-volume distribution at low per-unit cost, fliers can be developed using any DTP program or by more sophisticated word processors.

BROCHURES

Many business communications are designed to appeal to a customer's mind. Brochures, on the other hand, often reach for the heart, conveying personal values such as service, quality, expertise, and leadership. They can be effective in competitive markets where products are similar and you must establish an edge via emotional appeal or demonstrations of superior benefits or experience. Brochures also give detailed information about your product or service at point of sale and offer potential buyers an easy means of reference.

Defining your brochure's level of quality depends on your budget and on your intended audience. Discriminating clients may be more impressed by the ideas expressed in your brochure than by expensive paper and four-color printing-but if you have the resources, by all means make the brochure as attractive as possible. For the very highest quality in graphic design and photographic reproduction, turn to professional design and commercial printing services. If you have the necessary skills, the high-end DTP programs previously mentioned can be used to produce attractive brochures. All provide typographical and text-handling controls. color support, ability to import scanned photos, and support for advanced illustration programs such as Adobe Illustrator 88 and Micrografx Designer.

CATALOGS

Catalogs are basically retail or wholesale stores in print. They should contain all the information a customer needs to make a purchase, including product lists and photographs, prices, advertising copy, toll-free phone numbers, and mail-in forms. Mail-order companies use catalogs to reach specific customers in a wide geographic region from one or a few strategic locations. This gives the mail-order business better control over product inventory and distribution and significantly reduces overhead costs.

If your catalog is text intensive, with limited graphics and no photos, use a sophisticated text-formatting or word-processing package to produce it. However, if you want photos, color, and illustrations, and if

Need a Computer?



Before You Run, Walk to Square One

At Square One we treat you like you wish other computer consultants would. We're proud to serve you and realize that without you we're just another computer business peddling advice.

When you decide to purchase a computer system, we'll be right there to help.



123 Main Street

Chicago, IL 60001

312-555-4321

ADVERTISEMENT. Most ads—which typically wind up in newspapers—should be done in black-andwhite, since one color is much less expensive to print than four colors.

Note how Samek used a publicdomain photograph to illustrate the headline—both inexpensive and effective. Note, too, how he mixed a sans serif type (Futura Extra Bold Condensed) for the headline and an easy-to-read serif type (Times) for the body text.

As with all the printed materials, Square One's logo was inserted in the ad to give the company a coherent identity.

your catalog is more than 25 pages long, consider a high-end DTP package that features style sheets and precise text-manipulation controls. Searching for and replacing sections of text (as with *PageMaker*'s Replace command) makes updating long documents a snap.

ADVERTISEMENTS

Advertisements inform and persuade your customers and position your business by providing news, testimonials, performance comparisons, or special benefits. They also presell products to a specific audience and attract sales leads. Lawyers, doctors, dentists, and consultants place professional advertising. Business-to-business advertising deals with products or services people buy for their companies.

Advertisements are generally quality pieces. If you need the highest levels of graphic and photographic reproduction, you may require professional design, photoprocessing, and printing assistance. If you possess advanced design and desktop-publishing skills, though, look to high-end

programs for color and photo importing and for advanced typographical features. For example, headlines and captions are important elements in any advertisement. You should be able to use large type sizes and adjust letter and word spacing. Also, make sure your program allows you to position captions below visuals. The precise typographic controls of *QuarkXPress* and the layout flexibility of *PageMaker* make them top contenders for this kind of work.

OBVIOUS, BUT IMPORTANT

Even before you read this article, you were undoubtedly familiar with the various materials covered above. Still, it helps to remember that each type of printed piece serves a distinct purpose for your business. And knowing ahead of time how far DTP software can take you in making these pieces will save you from frustration and wasted time. But more important, the right printed pieces can impart a coherent character to your business' image that's worth much more than the cost of creating those materials.

Gambling Expert Hits A Different Kind of Jackpot

am Micco, 42, admits that for most of his life he really didn't know what he wanted to be. One thing was certain, though: He knew he loved people. A relentless gift of gab coupled with a talent for convincing apprehensive individuals to buy something—anything—were attributes Micco just knew he would use at some point in his career.

"Sam is the world's greatest salesman," says his wife and business associate, Maryanne. "He's like a light bulb. He has new ideas going on in his head all the time. He's the type of man who has to work for himself." But it took years to come up with a business idea that he liked.

After serving in Vietnam, the young veteran docked in Alameda, California, in 1970 and quickly landed a position as maintenance controller with TransInternational Airlines. His duties included locating parts for planes and making sure jumbo jets were properly serviced. On his days off, Micco often flew across the Nevada desert to visit relatives and friends in Las Vegas.

The restless voyager eventually left the airline and signed on as an assistant with a team of geologists. But when he was laid off, he decided to try his luck at the gaming business in Las Vegas. On May 5, 1975, Micco arrived in Glitter Gulch and snagged a job dealing blackjack at the Four Queens Hotel and Casino.

For the next several years, Micco bounced from job to job and from casino to casino. He learned craps, roulette, baccarat, and a host of other casino games. Eventually he was hired by the Hilton Hotel. When a position as a gaming instructor opened, Micco jumped at the chance. "What a job," he thought to himself. Dressed in a tuxedo, Micco became the goodwill ambassador for the Hilton and the star of the hotel's closed-circuit television station. Brandishing an addictive smile and congenial boyish humor, he immediately became a hit with the hotel guests by teaching them how to gamble.

MICCO FINDS A BUSINESS HE LIKES

"Then one day I saw a little ad in the newspaper for an import-export business seminar at the Marina Hotel," says Micco. When It Comes to
Making His
Part-time Promotion
Business Successful,
This Las Vegas
Gaming Instructor
Believes in
Hard Work,
Not Luck.

BY ART NADLER

"I went to listen to this guy, and everything he said described me. The more research I did on importing and exporting, the more it seemed like the direction I wanted to go. The man said the whole world is your market, not just Las Vegas. The more I heard, the more I liked."

Micco spent the early 1980s studying the import-export business in his spare time and took the name Compass International, Inc., for his new home-based business. He married Maryanne in 1983, and she became the company's secretary and treasurer.

Micco thought he would get involved in buying and selling commodities such as sugar, wheat, or flour. However, through his position as gaming instructor, he met businesspeople attending conventions in Las Vegas. "After the gaming classes were over, many of the businesspeople told me to come over and see them at the convention," Micco recalls. "They'd give me a badge and a bag, and I'd go from booth to booth. When I was done, I had a bag full of pens, buttons, flashlights—all giveaways with company names on them. Being in the import-export business, I decided, I can import this stuff, too."

ROUNDING UP CUSTOMERS

Micco made a point of visiting as many conventions as he could in Las Vegas. He found that his tuxedo made booth operators curious, and they were willing to talk to him.

Micco discovered that the person who buys the promotional items is usually the one who mans the booth at conventions. "Rather than flying to meet this person in his office and taking the chance that he or she wouldn't see me, I just went to the conventions." He also discovered that most of them ordered their promotional items from catalogs.

Micco bought 500 catalogs from a Florida company for \$650. Using the list of business contacts he acquired while conducting his gambling school and attending conventions, he began calling potential buyers.

"I called my competitors to see what prices they were charging, and then I cut my prices from those suggested in the catalog," Micco says of his business tactics. "The first two and a half years I paid everything out, and hardly any money came in. I put everything I made into the business."

Converting a section of his bedroom into an office, Micco spends all day Monday contacting potential customers by telephone. He also sets aside one to two hours every morning before going to work at the Hilton and two more hours each evening after his two children, Angela, 4, and Sam, 2, go to bed.

Micco expects to make \$25,000 this year on his promotional-items home business. Most of the money he made, he says, has been put back into new computer equipment and office supplies. "This business is going to become a monster," he predicts.

LEARNING THE TECHNOLOGY

Micco spent \$2,500 on a Leading Edge computer and a Thomson monitor simply because everyone said he would need a computer for his business. However, he knew nothing about computers, so he enrolled in a course at the University of Nevada in Las Vegas. He was hooked.

"I had been doing everything in a haphazard way. I had notes written all over the place. And then one night I was standing in line at a drug store and saw a copy of HOME-OFFICE COMPUTING magazine. I read about a program called *ACT!* Before I read it, I thought I had my act together—but I didn't."

ACT! helped him establish a system in which he can maintain status reports on all his customers. With the program, he can record when he last talked to a customer and what they talked about, keep notes on customers, and remind himself when to call them back.

COMING UP WITH SALES TACTICS

"I have a VIP list of 230 people I call or write at least once a month. I'm taking the approach that the more someone hears from me, the more that person is going to do business with me.

"Once I went to the bank and got 200 crisp, new dollar bills. I sent a dollar along

ART NADLER is a freelance writer who lives in Las Vegas.

Micco at work at the Las Vegas Hilton and in his home office with wife, Maryanne, and children, Angela and Sam.



with a letter that read: 'This is one of the thousands of dollars you will be saving doing business with Compass International, your one-stop shop for your imprint promotional items.'

"First of all, they see that some guy sent them a buck. The name Compass and the dollar will stick in their minds. Usually, a letter has a 30-second life span when a secretary gets it. But if there's a dollar in a letter, it will go to the boss. I found that the dollar had left a mark when I made my follow-up phone call."

To help his professional image, Micco uses only the finest business cards and stationery. Also, he recently purchased a Hewlett Packard LaserJet Series II printer. "Since I'm a little guy, my image is very important," he says.

Sam Micco

PART-TIME BUSINESS: Compass International, Inc., sells promotional items to businesses

RESIDENCE: Las Vegas, Nevada

YEARLY REVENUES FROM BUSINESS: \$25,000 ESTABLISHED: December 15, 1985

EQUIPMENT: Scion 386 series IBM-compatible computer with 66MB hard-disk drive and Mitsuba 710 VGA color 14-inch monitor; Hewlett Packard LaserJet II printer; Irwin Magnetics 64MB tapebackup system, Everex 1200-baud modem, Canon Faxphone 20, Sony A650 answering machine

SOFTWARE: Contact Software International Inc.'s ACT!, WordPerfect, Lotus 1-2-3

Rx FOR SUCCESS: "The harder I work, the luckier I get."

"Right now I'm getting little orders—200 pens, 500 pencils, or 1,000 key tags. But I'm a firm believer that five or six small orders

are just as good as one big order. If I only do big orders, and they decide to drop me, then I can get hurt. That can't happen if I have 10 little orders."

NO SUCH THING AS LUCK

"I like to keep sayings like this one posted around my office," Micco says, pointing to a piece of paper tacked just above his computer monitor. It reads: "The harder I work, the luckier I get."

"I have the best wife in the world," he says. "She does all the bookkeeping and supports everything I do. I have two children. I want to be able to give them the opportunity to graduate summa cum laude from Stanford University, and it will take money to get them there. This business is going to do it for them."

A Question-and-Answer Guide to

All You Need to Know About 5.25- and 3.5-Inch Disks

BY STEPHEN MILLER

or the newer 3.5-inch disk, uses double-sided ones. they're almost taken for double-sided disks? granted. But what do you really know about A: Yes—but I usually don't advise it. If floppy disks? Do you know which disk is best for your computer? Answers to this and more questions follow.

HOW DISKS DIFFER

Q: What's the difference between 5.25-inch and 3.5-inch disks?

A: Beyond the obvious—size, which precludes using one type of disk in the other type of drive—there are two major distinctions between 5.25-inch and 3.5-inch disks: the amount of information that can be stored and the protective covering. The smaller disk stores more information, oddly enough, and has a sturdier cover.

Q: What's the difference between single-sided and double-sided disks? How do I know which to buy?

A: There's no fundamental difference in the way single- and double-sided disks are made, except that the manufacturers have tested and will therefore guarantee only one side of a single-sided disk. Single-sided disks were popular because most early disk drives had only one read/write head. Most of today's drives have heads both above and below the disk and read and write on both sides automatically. For example, an older Apple IIe or IIc uses single-sided 5.25-inch disks, while an IBM PC or compatible computer works with the double-sided variety. The original Macintosh required single-sid-

hether the 5.25-inch variety ed 3.5-inch disks, but the current Mac SE

floppies are now so common Q: Can single-sided disks be used in place of

your computer manufacturer recommends double-sided disks, use them. Since only one side of a single-sided disk has been tested, you can't be certain that both sides will work correctly. Jeopardizing important data on the disk in order to save a few dollars could be costly in the long run. However, if you're using the disk solely for your working copy of a program and you have the original program disk handy, you can use single-sided disks to run your programs without fear of losing anything.

Q: What about using double-sided disks instead of single-sided ones?

A: Go ahead—if you don't mind wasting money. A double-sided disk of the correct size and density should always work in a drive designed for single-sided disks. However, the drive will read and write data to one side of the disk only, leaving the other side unused.

Q: What do I need to know about single-, double-, and high-density disks?

A: Density refers to how much data can be reliably stored on a disk. If you don't know already, first find out which type your computer uses. Single-density floppies are no longer common; today nearly all computers require at least double-density disks. Highdensity (sometimes called quad-density) 5.25-inch disks are needed for 1.2MB drives on AT-class compatibles; and 1.44MB drives, like those on the IBM Model 50 Z and the Mac IIcx, use high-density 3.5-inch disks.

Q: Can double-density disks replace highdensity disks?

A: No. Double-density disks can't store the same amount of information as a high-density disk can, so you're asking for trouble if you format a double-density disk in an IBM high-density drive (Mac high-density drives can format any 3.5-inch disk). However, most IBM-type high-density drives will write to a double-density disk. Even so, this is not a good idea because too often the disk can't be read subsequently on a doubledensity drive. Yet if you need only to read data from a double-density disk in a highdensity drive and not write to it, you shouldn't have any problems.

Q: Why can you put 800K on a double-sided, double-density 3.5-inch disk when using a Mac, but only 720K on the same disk when using an MS-DOS computer?

A: The operating systems for Macintosh computers and IBM compatibles format disks differently. The technique used by the Mac puts more sectors on the disk, particularly in the outer tracks, which are longer than the inner tracks.

Q: How many pages of text can be stored on a disk?

A: A rule of thumb is that it takes about 2K to store one double-spaced page. Therefore, you can save approximately 180 pages on a 5.25-inch 360K disk; 600 pages on a 5.25inch 1.2MB disk; 360 pages on a 3.5-inch 720K disk; and 720 pages on a 3.5-inch 1.44MB disk.

Q: How many graphics files fit on the same

A: Graphics need more space—up to 50K for a CGA image on an MS-DOS system or a black-and-white image on a Macintosh.

STEPHEN MILLER is a contributing editor for HOME-OFFICE COMPUTING.

Divide the page estimates above by 25 for an approximate count of images on each size disk.

ILLUSTRATION BY BOB CONRAD

Q: Which type of disk sells better: 3.5-inch or 5.25-inch?

A: The 5.25-inch disk is the hands-down champ, far outselling the 3.5-inch variety, simply because it's been the standard for more than a decade—millions of computers use the 5.25-inch format. That's going to change over the next few years because 3.5inch disks are the de facto standard in most new computers. IBM's PS/2 line comes with 3.5-inch drives, as do nearly all laptops and every Macintosh or Apple IIGS computer.

THE BEST DISKS

Q: What makes a good disk good?

A: A high-quality disk will format the first time with no errors, as will every other disk dardized and fairly stable, so you're pretty

in the box. A good disk will also let you read and write data repeatedly-over months or even years—without losing any information. Finally, well-made disks can be reformatted many times with no error messages.

Q: Which are the best brands of floppy disks?

A: There are too many variables to give you a simple answer. Disk technology is stansafe with any major brand. That's not to say, however, that even major brands are without problems. Fortunately, most manufacturers will replace faulty disks-but only the disk itself, not the data on it (see box, "Disk Manufacturers"). For more specifics about high-quality disks, I spoke with Ken Silverman, who coedits with his partner, Joe Kroeger, a free newsletter called The Diskette Gazette, published by International Datawares Inc. ([408] 262-6660 or [800] 222-6032). The company not only sells blank disks and other computer products, they also duplicate software on more than two hundred thousand 3.5-inch floppies every month.

"We find real-life testing more meaningful than abstract lab tests," Silverman said. "And we consider any brand excellent that is defective in fewer than one out of 5,000 diskettes. While we haven't tested every brand of disk, there are three brands of 3.5inch disks that we regularly rate as excellent: Sony, C. Itoh, and TDK. And in a recent Diskette Gazette (Issue 12), JVC, Maxell, Kao, and Verbatim were also rated excellent. All brands are good most of the time, but truly excellent diskettes are consistent from lot to lot to lot. Sony disks regularly get the best rating, with an average of only one out of 9,000 defective. Not only did the company invent the 3.5-inch disk, it

DISK MANUFACTURERS

For more information on floppy disks, contact the following manufacturers:

3M: 8200 Highwood Dr., Minneapolis, MN 55438; (800) 888-1889, (612) 733-1110

BASF: 35 Crosby Dr., Bedford, MA 01730; (617) 271-4000

Brown Disc: 1110 Chapel Hills Dr., Colorado Springs, CO 80920; (719) 593-1015 **C. Itoh:** 2505 McCabe Way, Irvine, CA

92714; (714) 660-1421 **Fuji:** 555 Taxter Rd., Elmsford, NY 10523;

(914) 789-8100, (800) 223-6535 **JVC:** 41 Slater Dr., Elmwood Park, NJ 07407; (800) 526-5308, (201) 794-3900

Kao: 41444 Christy St., Fremont, CA 94538: (415) 657-8425

94538; (415) 657-8425

Kodak: 343 State St., Rochester, NY 14650; (716) 724-4000, (800) 445-6325

Maxell: 22-08 Route 208 S., Fair Lawn, NJ 07410; (201) 794-5900

Memorex: 461 S. Milpitas Blvd., Milpitas, CA 95035; (408) 957-1000

Polaroid: 549 Technology Sq., Cambridge, MA 02139; (617) 577-2000

Sony: Consumer Products, Sony Dr., Park Ridge, NJ 07656; (201) 930-1000

TDK: 12 Harbor Park Dr., Port Washington, NY 11050; (516) 625-0100

Verbatim: 1200 W.T. Harris Blvd., Charlotte, NC 28213; (704) 547-6500

Xidex/Dysan Products: 5100 Patrick Henry Dr., Santa Clara, CA 95050; (408) 988-3472

FLOPPY BACKGROUNDER

Here's some background information about floppy disks and some common terms used when working with them:

• A floppy disk (also called a diskette) is a recording medium that allows your computer to store and play back programs or data. Floppies come in several sizes, the most popular being the 5.25- and 3.5-inch varieties. But why doesn't it flop? you might ask. If you ever saw an original floppy disk, which was 8 inches in diameter and drooped when held by one end, you'd understand the name's origin.

• While each manufacturer has a slightly different technique for making floppy disks, essentially a round piece of mylar plastic or PVC (polyvinyl chloride) is coated with a magnetically sensitive compound from the oxide family, similar to the coating on an audio cassette or videotape. The treated disk is then encased in a protective plastic cover (pliable for 5.25-inch disks and rigid for the 3.5-inch

variety).

• When you write information on a disk, an area of the disk is magnetized in a pattern that can be translated by the drive head into bytes of data which the computer then interprets as text, numbers, graphics, or sound.

• Formatting a disk—called initializing on the Macintosh—means preparing a disk so that it can store information. New disks are like records without grooves. Formatting cuts grooves into the disk and checks it for errors. Technically, formatting divides a disk into tracks (concentric circles) and sectors (slices out of each track) and reserves space for MSDOS or the Mac Finder housekeeping functions such as the disk directory, which holds information about all the files on that disk. With an IBM compatible, the DOS Format command will do the trick. On a Mac, simply insert the disk and follow the dialog box's instructions.

also produces 60 percent of the world's output. Sony disks have a unique construction that makes them sturdier: a metal lifter instead of the plastic lifter that all other manufacturers use [a lifter holds the diskette's cleaning material against the disk media itself; for more details about a disk's construction, see the diagram "Anatomy of a 3.5-Inch Disk"]. It's even easier to find high-quality 5.25-inch disks—any brand is acceptable, since everybody knows how to make good ones now."

FLOPPY CARE AND MAINTENANCE

Q: What does it mean when a manufacturer advertises that its disks are certified as "100 percent error free"?

A: It simply means that the company has inspected the disk and found no obvious errors, such as scratches on the surface of the disk, uneven coating, or technical errors that will keep it from working properly. It does not mean that the disk is guaranteed against hidden defects. When manufacturers say a disk is 100 percent error free, they mean they will replace it if it's bad.

Q: What's the best way to store disks?

A: Always store a 5.25-inch disk in its sleeve. You need not, however, retain the plastic sleeve that most 3.5-inch disks come in. You should keep all disks upright in a storage box when they're not in use. Keep disks away from magnets or magnetic fields such as those emitted from a ringing telephone (the bell is an electromagnet), monitors, paper clips (which are often slightly magnetized), and scissors (same as paper clips). Never touch the actual disk surface; skin oils can spoil the data.

Q: Does temperature affect disk operation?

A: Yes. Keep disks away from excessive heat or cold (above 125 degrees or below 50 degrees Fahrenheit). Heat can warp disks and cold can make them brittle. A rule of thumb: If you're comfortable, your disks are comfortable.

Q: Does formatting a disk repeatedly hurt it?

A: No. Keep in mind, though, that disks are not indestructible. Over years, any disk can go bad from normal use. A disk spins at high speeds, and the read/write heads are raised and lowered onto it frequently; the disk will eventually wear out. Still, as long as it formats without error, a disk is safe to reuse

Q: How do you know when to discard an older disk?

A: If you have any trouble at all saving data to or reading data from a disk, discard it after making a new copy from your backup. For disks that get a lot of use, it's prudent to make a new copy from the original at least once a year.

Q: Can a damaged disk be repaired?

A: It depends on the damage. Disks that have gotten wet are often readable once they've dried out. Warped or bent disks can be pressed between heavy books and then read. Once you recover the data, copy and discard the damaged disk. Back up your disks regularly, and when a disk gets damaged, throw it out and make a new copy from the backup.

Q: If I've lost data from a disk, is it lost forever?

A: Not necessarily. With a good disk-recovery utility program (there should be one in every office), you can reconstruct most files on a damaged disk, saving you extreme aggravation. Two popular MS-DOS utilities that include disk-recovery modules are *Norton Utilities* (Peter Norton Computing, [213] 319-2000) and *PC Tools* (Central Point Software, [503] 690-8090). Macintosh users can rely on the *Symantec Utilities* (Symantec, [408] 253-9600).

Q: How long do disks last?

A: Nobody really knows. Disks in storage can last for years, but floppies have not been around long enough to determine their effective life span. Some manufacturers say disks could last 100 years or more.

Answering Machines for Doing Business

Answering Machines Are As Essential As the Phones They Answer. Here's How to Find a Top Performer.

BY ELLIOT KING



ven the experts can go astray. When Carol D'Agostino, a senior research associate at Link Resources Corporation, a research firm specializing in the home-office market, set up her own home office, she bought a telephone-answering machine—but it was the wrong one.

The problem? She couldn't adjust the number of times the telephone rang before the machine would answer, so she had to turn the machine off when she worked. If she went out without turning it on, she was out of luck. Worse, the unit recorded dial tones and other useless noise and cut off callers after 30 seconds.

ELLIOT KING, a freelance writer, has been covering the small-business and technology market for the last six years.

Then D'Agostino got lucky. Somebody stole her answering machine, giving her the chance to buy what she really needed.

WHO NEEDS IT?

While businesspeople aren't always sure about their equipment needs, they do know that the answer to an empty office is an answering machine. "It's hard to imagine a home office without one," says Ray Boggs, director of small-business and home-office research at BIS CAP International, a research firm. "Home-office workers have to stay in touch so their clients don't feel at a disadvantage."

The right machine, properly used, can be like a secretary, a message center, and a time-management tool wrapped in one. Not bad for a piece of equipment with an aver-

age retail price of about \$100 to \$150. The more expensive models usually include full-featured telephones too.

SOME HISTORY

Though unheralded, answering machines were among the early artillery in the assault on AT&T. Invented in a garage in suburban Los Angeles about 20 years ago, the first models were battery-operated, reel-to-reel tape recorders. They were marketed primarily to those whose jobs kept them away from home, such as airline pilots, and to a select group of adventuresome small-business people.

Almost immediately, Ma Bell moved to prohibit consumers from attaching telephone-answering devices to the telephone network without expensive conversion couplers sold exclusively by . . . guess who? In 1972, the Federal Communications Commission ruled against AT&T, a decision affirmed by the Supreme Court in 1977.

But the court ruling did little to fuel interest in answering machines. By most accounts, the first generation of machines was expensive, unreliable, and awkward. Furthermore, the equipment sparked strong consumer resistance. The idea of talking to a machine shocked people, and they would hang up without leaving a message.

Several developments in the late 1970s and early 1980s broadened the answering machine's appeal. The conversion of the telephone network from pulse to touch-tone dialing allowed for remote access to answering machines: Users could call in for their messages at any time, from anywhere. Also, several companies manufactured units using a single microcassette, decreasing the size and lowering the price dramatically. Finally, the growth of voice-mail systems in large companies helped people become more comfortable talking to machines: Some now think of a voice mailbox as something of a status symbol.

WHAT YOU SHOULD KNOW

Although answering machines are eminently suitable for small businesses, until recently manufacturers did little to differentiate business machines from those designed for consumers. With the growth of the home office, however, that is changing. There are now more offerings than ever and a full range of features. The features cluster around the machine's three basic functions: making an announcement, recording the message, and accessing the message.

These days, answering machines come in a few different fundamental configurations. They can have a single cassette on which both the outgoing and incoming messages are recorded; dual cassettes, with one for the outgoing message and one for the incoming; or the newest versions, in which the outgoing and incoming messages are digitally recorded on a microchip.

Single-cassette machines are the least expensive and most compact—but they pre-





BUYER'S GUIDE TO ANSWERING MACHINES

This chart includes some of the most useful, feature-filled answering machines available from major manufacturers; these units are ideal for most home-office needs. Aside from features we have come to expect (voice-activation capabilities, message counters, etc.), these machines offer extras such as time/date stamping, priority calling (which lets you give certain callers special codes to reach you), and line recording (which allows you to record both sides of a conversation).

	Price	Warranty (years)	Outgoing/Incoming Message Type (Digital, Tape, or Microcassette)	Outgoing/Incoming Message Length (Minutes or Seconds)	Phone Lines		Security Codes (digits)	Ring Select	Power Failure Memory	EATURES Announce Only	Extension Interrupt	Time/ day Stamp	Call Screen- ing	New Message Selection		Record Greeting	Message Save/ Erase	Other features
AT&T 1321	\$130	1	M/M	4m / 60m	1	Y	2	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	audible message alert,
1330	\$180	1	D/T	30s / 6m	1	Y	3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	audible message alert, priority call
BELLSOUTH Memento 8000	\$80	2	T/T	60s / 29m	1	Y	3	Y	Y	N	N	N	Y	N	N	N	Y	
COBRA		10 4505			D. H		TO IT					THE RES	Marine.	Edwarf.	36			
AN-85161 AN-8531	\$160 \$120	1 1	D/T T/T	32s / 2m 3m / 2m	1	Y	3	Y	Y	Y N	Y N	Y	Y Y	Y N	Y	Y N	Y Y	line record
CODE-A-PHONE		And the	er of real part by	to bring the	16	Janear	affec	y make	Ludba	arand o		h. "	49	les la 1		Villamore I	. day	ALCOHOLD TO THE
2770 6200	\$160 \$190	1 2	D/M D/D	16s / 60m 18s / 18s	1	Y	3	Y	Y	N Y	Y	Y N	Y	Y	Y	Y	Y	selective save/erase
NORTHWESTERN BELL				Hara Later	RESIDE A			F-11-12		A LONG	AN PERSON	VA-, 41	Joy lot	ri simili	192000	Me Vin	01.00	Tillasiron avai
Answermate 1100	\$140	1	T/T	20s / 30m	1	Y	2	Y	Y	N	Y	N	Y	Y	Y	N	Y	line record
Answermate 1201	\$160	1	T/T	30s / 30s	1	Y	2	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	line record
PACTEL																		
TA9000 TA9010	\$100 \$120	2 2	D/M D/M	20s / 30m 20s / 30m	1	Y	1	Y	Y	Y N	Y	N	Y	Y	Y	Y	Y	line record, hold
	\$120	2	D/M	208 / 30m	1	Y	2	1	1	N	1	1	1 1	1	1	1	1	ille record, noid
PHONEMATE 7400	\$200	1	T/T	30s / 30m	2	Y	1	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	
RECORD A CALL	nin (6)	ow yor	T makroos	חכע ומפני ו	0.49	non	Salle 1	Philip	64-11	/m2 7 E	witosov	14 . 1	of fear	la la la	Nr and	WARE	bloow	verification.
2120	\$150	1	T/T	60s / 60m	2	Y	3	Y	Y	Y	Y	N Y	Y	Y	Y	Y	Y	line record
3120	\$179	1	T/T	60s / 60m	2	Y	3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	line record, audible message alert
SOUTHWESTERN BELL	ATT I	walker !	er hands t	and the same	1000	1000	b view	100	mild o	e the	1 70 25	12 13	in to	obstano9	re litera	od) .	arao W	Colour So tu
FA 1800	\$170	1	D/T	16s / 60m	1	Y	3	Y	Y	Y	Y	Y	Y	Y	Y	Y		line record
FA 1525	\$130	1	T/T	30s / 60m	1	Y	1	Y	Y	Y	Y	N	Y	Y	Y	Y	save only	THE REAL PROPERTY.
TANDY		· Kantea	PERSONAL PROPERTY.	102	MA .	USKU	Anad	may .	ON THE DE	BENORIS	0.001					800	BASS B	
TAD-330 TAD-320	\$140 \$200		M/M M/M	3m / 3m 3m / 3m	2	N	3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	line record

Standard Remote Features: toll-saver, beeperless, remote on.

sent potential problems. Before a caller can leave a message, the machine must fast forward past other messages until it comes to an unrecorded space on the tape. If there are several long messages, the pause before the beep can seem longer than a boring meeting on a sunny day.

Dual-cassette machines, the most common technology, come in two varieties—those that use standard cassettes and those with microcassettes. Although some manufacturers argue that the difference between the two is primarily aesthetic (microcassettes take up less space), others claim that microcassettes provide higher quality. Tape quality counts, particularly because the same portion of incoming tape is contin-

The right machine can be like a secretary, a message center, and a time-management tool wrapped up in one. Not bad for \$100 to \$150.

ually rerecorded, and the outgoing message may be played 20 times a day or more. Poor-quality tapes can begin to snap, crackle, pop, and hiss in no time—usually, it seems, during the most important messages.

With that in mind, some manufacturers have introduced machines with digitally recorded outgoing messages, which sound the same no matter how many times they're replayed. But because the memory chips used in digital answering machines are expensive, the outgoing announcement on some units is often only 16 seconds long—barely long enough to record "I can't come to the phone. . . ." For casual use, that may do the trick, but businesses often want to say more.





BUYER'S GUIDE TO ANSWERING MACHINE/TELEPHONES

For those who prefer multi-functionality in one small package, integrated answering machine/telephones are the answer. These machines have available all of the options that stand-alone answering machines and telephones have, but when these features are in one unit, fast, efficient communication becomes easier and less expensive.

	Price	Warranty	Outgoing/Incoming Message Type (Digital, Tape, or Microcassette)	Outgoing/Incoming Message Length (Minutes or Seconds)	Phone Lines	Memo	Security Codes (digits)	Ring Select	Power Failure Memory	FEATURE Announce Only	Extension Interrupt	Time/ day Stamp	Line- Record	Call Screen- ing	RE Replay	Record Greeting	Message Save/ Erase	TELEP Speaker- phone	HONE FEATU Auto-dial Memory (numbers)	
AT&T 1521 ¹	\$170	1	M / M	60s / 4m	1	Y	2	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	9	N
BELLSOUTH Memento 8200	\$120	1	Single microcassette	150s / 150s	1	Y	1	Y	Y	N	N	N	N	Y	Y	Y	Y	N	10	N
COBRA AN-85181 AN-8521 ²	\$200 \$200	1 1	D/T M/M	32s / 2m 3m / 2m	1 1	Y Y	3	Y	Y	Y	Y Y	Y N	Y N	Y Y	Y Y	Y N	Y Y	N N	9 .	Y N
CODE-A-PHONE GTE 7520 ¹ 6250 ³	\$200 \$240	1 2	D / M D / D	16s / 30m 18s / 18s	1	Y Y	1 3	Y	Y Y	N Y	Y	N N	N Y	Y Y	Y Y	N Y	Y Y	Y N	16 12	Y
PACTEL TA9100	\$120	2	D/M	20s / 30m	1	Y	1	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	20	N
PHONEMATE 4650 ⁴ 4150 ⁴	\$240 \$180	1	T / T T / T	30s / 30m 30s / 30m	1	Y N	3 3	Y	Y Y	Y N	Y	Y	Y N	Y	Y Y	Y	Y Y	Y N	20 9	Y Y
2140 3160 ⁵	\$170 \$230	1	T/T T/T	60s / 60m 60s / 60m	2 2	Y Y	3 3	Y Y	Y Y	Y	Y	N Y	Y	Y Y	Y	Y Y	Y Y	N N	9 9	N Y
FA 1625 FA 1900	\$170 \$200	Market b	T/T D/T	30s / 60m 16s / 4.5m	1	Y	1 3	Y	Y Y	Y Y	Y	N Y	Y	Y	Y	Y	save only		10 10	N N
TANDY TAD-252	\$180	1	M/M	3m / 3m	1	Y	3	Y	Y	N	Y	N	Y	Y	Y	Y	Y	Y	20	Y

Other features: ¹priority call; ²cordless handset; ³selective save; ⁴handset message retrieval; ⁵3-way conferencing

Standard Features: rewind/fast forward, voice activated, message counter. Standard Remote Features: toll-saver, beeperless, remote on.

Standard Phone Features: Tone/Pulse Switchable, Last # Redial

MANUFACTURERS

AT&T (800) 222-0300; Bell South (205) 985-6800; Cobra Electronics Group, Dynascan Corp. (312) 889-8870; Code-a-Phone Corp. (503) 655-8940; Northwestern Bell Phones (402) 390-8600; PacTel Products (415) 882-8742; PhoneMate (213) 618-9910; Record A Call (213) 603-9393; Southwestern Bell Telecommunications (314) 822-6800; Tandy Corp./Radio Shack (817) 390-3011

OUTGOING MESSAGE TECHNOLOGY: WHAT MATTERS?

Although often ignored, outgoing-message capacity is an important feature for businesses. Most residential users rarely change their outgoing message, but sophisticated outgoing-message management can signal to callers that you are closely in touch with your office even when you are thousands of miles

Many units can rerecord the message remotely, and a few high-end machines can record several outgoing messages and allow the user to select from among them.

Moreover, some tape-based answering machines will accept outgoing messages of up to 30 minutes. Used in conjunction with an announce-only feature, where no incoming message is recorded, long outgoing messages can be a very effective after-hours messaging system. For example, says Jim Oblak, director of marketing at PhoneMate, "A real-estate office can leave seven minutes' worth of listings and not take any messages."

WHAT'S IMPORTANT FOR **INCOMING MESSAGES?**

More important than the outgoing messages are the incoming ones. Once, machines allotted a set amount of tape—usually around 30 seconds—to record each message, regardless of how much time was needed. Today, virtually all machines are voice activated: They start recording when they hear a voice and stop when the voice stops. Although some voice-activated machines have a maximum length for each incoming message, many only limit the message to the length of a 60-minute tape.

In addition to answering incoming telephone calls, some machines have a memo feature that allows you to record directly onto the machine without using the telephone. So if you're leaving on a business trip an hour before your spouse returns from the office, you can record any last-minute words directly onto the unit.

Also, answering-machine message security has emerged as an issue. Some machines have built-in security codes so that messages can be accessed only by people who know the proper three-digit password.

Finally, if you ever want to record both sides of a conversation, look for a unit equipped with a two-way record feature, which doubles as a simple phone recorder.

ACCESSING MESSAGES SHOULD BE EASY

How messaging is managed when you are both home and away is the final factor in the purchasing equation.

Ease of use is a sine qua non of consumer technology. For accessing answering machines, that could mean one-button operation. But controlling every feature-playback, erase, reset, fast forward, record outgoing messages, and so on-with only one or two buttons can be complicated. In

response, many manufacturers have consoli- SPECIAL FEATURES FOR dated playback and reset into one operation BUSINESSES and use other buttons for other duties.

Ease of use appears in other guises as well. One of the most annoying experiences for many answering-machine users is when they get to the phone after the machine has already answered. Then they have to listen to their own outgoing message and turn the machine off or have their conversation recorded.

There are two solutions to this problem. Most units allow users to adjust the number of rings after which a call will be answered so the machine will not pick up for as many as seven rings. Others have a call-interrupt feature: The machine will turn off as soon as the handset is lifted from the telephone. Call

About half of all answering machines are sold with integrated telephones.

interrupt is particularly convenient when used with call screening, which allows listeners to monitor incoming calls and answer at their own discretion.

But it's the ease of remote access that has made the answering machine such a powerful business tool. With remote access, peripatetic entrepreneurs are never more than a phone call away from their offices.

A beeperless-remote feature lets you pick up messages without carrying around a beeper device. Interestingly, the older versions of beeperless-remote machines do not work from all public telephones because not all public telephones use standard tone signals. Some manufacturers now include what is called advanced tone remote to ensure that answering machines can be accessed remotely from telephones using "short burst" tones and from cellular telephones.

In most beeperless-remote systems, you can operate nearly all of the machine's functions from afield. Some nice additional features are the ability to skip the outgoing messages, to listen only to new messages, and to repeat the previous message or move on one message at a time.

And the toll-saver feature lets remote users know whether or not they have any messages without having to pay for a completed phone call. It works by having the phone ring longer before the machine picks up if there are no messages: A common arrangement is four rings for the first message, two rings thereafter. So if the phone rings three times, for example, you know there are no messages and can hang up.

Message forwarding is just one of a series of newer features aimed at making answering machines more suitable for business. In addition, the number of different two-line answering machines has increased, and manufacturers have beefed up message counters. In older units, if you received one to four phone calls, a red light would blink one to four times; but if more than five calls were received the light would continuously blink. In the new technology, a digital counter can handle up to 99 phone calls.

The most ballyhooed new business-oriented feature this year has been the time/ date stamp. With the time/date stamp, the machine automatically notes when the call was received.

Next year, you'll find machines with message-sorting capabilities, which give several private areas to record incoming messages. The units mimic corporate voicemail systems: When a caller connects, the outgoing message may say, "If this message is for Susan Smith, press six." Only Susan, using a special security code, will be able to access her messages. "Businesses need a product for multiple users," says Code-A-Phone's marketing manager, Linda Lybeck, whose company will release a machine with advanced message sorting this

ANSWERING MACHINE/FAX COMBO AND HOME VOICE MAIL

The latest telephone-answering devices are more feature-laden than ever before: About 50 percent are sold with an integrated full-featured telephone. And answering machine-fax combinations are becoming more common, although the marriage of the two technologies is not yet seamless.

Meanwhile, at least four regional Bell operating companies (R.B.O.C.s) are currently testing voice-mail systems that eliminate the need for answering machines. Instead, telephone subscribers receive a voice mailbox on a computer in a central switching office.

In the tests, the R.B.O.C. messaging systems cost residential subscribers around \$5 a month. One analyst speculates that eventually the telephone companies will be able to offer the service for free, generating profits by the increased number of completed calls. Heidi Harris, director of voice-mail products at Pacific Bell, disputes this theory: "I don't know of any data that could prove the systems could be offered without charge."

What no one can dispute is that voicemail technology is good news for businesses without receptionists. And as answeringmachine technology has improved, resistance to talking to a machine has receded. For small businesses and home offices, an answering system has become something like an American Express card. You shouldn't leave home without one.

First Publisher makes vou Forason

Volume 2

WHERE HOT HAPPEN

Retailers Reprise Rockers

A handful of Melody Record's | president of Marketing, has strongest retail customers are determined to bring back our profitable but obscure collection of rock oldies, which haven't been on wax since 1972.

The RPM Plus chain, with 57 California outlets, has demanded we reissue "13 Speeding Hipsters, "Songs about Buicks & Blondes," as well as Melody's all-time topselling collection, "Heaven or Heart-break," eclectic rock hits from 1952 to 1958 the seminal years of early doo-wop and twangy guitar-basedbands.

Other retail stores in Wisconsin and Texas have also made similar requests, and E. B. "Buzz" Miller, vice said, "this is just the tip of the oldies iceberg."
Which will look good on Melody's bottom line.

On the same note, another group of previously unreleased recordings by many of these artists will soon be available. Discovered by Melody Records' archivist

Rip LaStrange, these new-foundold sounds will be available as "Raw Rockers."

One unique feature of this new release will be its denim cover, with copper rivets at the four corners, a pocket and a leather patch which will be

similar in design to the Levi's denim jeans so popular in the 1950's. (cont'd, page 6)

CHORAL CONVENTION

COMING

Melody is proud to be a partsponsor of the annual "Sing It Sister" convention of international women's choral groups. This world-renowned confab brings together some of Melody's most deserving artists in a spotlighted forum that will be satellite broadcast to the USSR, Bulgaria and Sri Lanka for the first time ever, for a projected total of 37.5 million viewers. It's a red-letter event for Melody's own distinctive song stylists, the Des Moinette



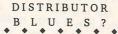
Triplettes, a chorus of 21 women made up of 7 sets of singing triplets from Des Moines, Iowa (cont'd, page 4)

OPPERS HART



For the second week running, Melody artists show strongly in the top 20 on country, pop and heavy metal charts. This week, country singer Sugar Blues sweetens her position at #19 with her latest, "Honey, Why'd You Go So Sour?" The WheelWellsroll up to #12 on the pop charts with "Rocker Arm

Assembly." And moving to #20 with a bullet in metal is BulletHedd with their latest single, "Bulls-eye." BulletHedd is an L.A. band that's new to the Melody label and showing a lot of promise.



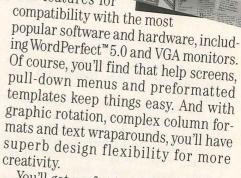
To keep you up to date on industry trends, Melody Records' CEO Johnny Melody reports many distributors' profit margins are narrower than ever, due to increased vinyl costs and strong competition from CDs and cassettes. Melody says, (cont'd, page 2)

Easy-to-use, affordable PFS: First Publisher 2.1 from Software Publishing now does even more to help your news-

PFS: First Publisher

letters and flyers get raves for professional good looks.

It starts with a limited time offer of free top-notch fonts for laser printers. And gives you new features for



You'll get professional quality output with the free disk of Bitstream™fonts, along with the dot matrix and laser printer support you need for the best results. And for even more design ideas, send in the coupon below.

With PFS: First Publisher 2.1, you'll create great-looking documents that sing your business's praises. At a price you'll applaud.

Call 1-800-255-5550 ext. 534 for new release information.

FREE NOTES ON TYPE DESIGN

Tune up your design skills with free tips on type in a book from Bitstream." Just return this coupon with your dated sales receipt showing proof of purchase for PFS: First Publisher 2.0 or 2.1 to: FP Design Booklet Offer, P.O. Box 7210, Mountain View, CA 94039-7210.

	Name	1200 1210.		
1				
	Address	Hallengely History	Territorio	No.
	City/State/Zip	PRITE	DA GLET	

Offer limited to one per registered user only. Allow 6-8 weeks for delivery. Must be postmarked by December 31, 1989. Not redeemable in store. 53400



First Publisher is a registered trademark of Software Publishing Corporation. All First running is a registered trademark of software running corporation. As other product names are trademarks of their specific manufacturers. © 1989 of their specific manufacturers. Of 1989 Software Publishing Corporation, 1901 Landings Dr., Mountain View, CA 94039-7210.

A Feature-Packed Printer, a Trailblazing Cordless Phone, and a Loaded Fax Machine

Each month, HOME-OFFICE COMPUTING'S Hardware Reviews take an in-depth look at new and worthwhile computers, peripherals, fax machines, copiers, phones, and other hardware.

Our reviewers set up the equipment in their own home offices. After heavy use and extensive testing, they rank each item on the basis of suitability for the home office and on overall value, taking into account performance, features, ease of setup, ease of learning and use, documentation, size, expandability/versatility, support, availability, warranty, and value for the money.

Then, the HOME-OFFICE COMPUTING Hardware Testing Lab conducts its own battery of tests (a printer speed test, for example) and verifies manufacturers' specifications. Finally, our technical editors weigh the reviewers' rankings, the lab test results, and their own experience to determine an overall rating on a scale of zero to four stars:

○ Poor
 ★ Average
 ★★ Good
 ★★★ Excellent

Note on Hardware Requirements:

Any product listed as requiring an IBM PC/XT/AT or compatible should also work with an IBM PS/2 Model 25, Model 30, or Model 30 286.

Packed with Power CIRCLE READE

CIRCLE READER SERVICE 101

AST Premium/386C Model 390

AST Research, Inc., 2121 Alton Ave., Irvine, CA 92714; (714) 863-1333

RATING: ★ ★ ★

SUGGESTED RETAIL PRICE: \$6,995

MICROPROCESSOR: Intel 80386 (20 MHz; zero wait states); socket for 80387 (math coprocessor)

MEMORY: 2MB, expandable to 16MB on included 32-bit memory board

DISK DRIVES: 5.25-inch 1.2MB floppy-disk drive and 90MB hard-disk drive with access speed of 18 ms (with included Enhanced Small Device Interface)

PORTS: One parallel, two serial



FREE EXPANSION SLOTS: 4 AT-type 8/16-bit, 2 PC-type 8-bit

SOFTWARE INCLUDED: MS-DOS 3.3, GW-BASIC v3.22, setup, and utilities

OPTIONS: AST VGA-Plus card (\$599), AST color VGA monitor (\$695)

DIMENSIONS: 16.5 by 19.3 by 6.3 inches

WARRANTY: One year

Without question, the AST Premium/386C Model 390 is meant to play in the personal-computer big leagues. It uses a 20 MHz clock, which puts it in the middle range of 386 computers. Like most 386s, it uses

memory caching to maximize its overall performance. Couple its processing speed with the swift 18 ms access speed of the 90MB hard-disk drive and you've got one explosive computer.

To get this computer running, you have to install a video card; connect the power, monitor, and keyboard cables; and install the software you plan to use. The menu software provided makes configuring your system simple, but read through the user's manual anyway to determine exactly which configuration is best for you.

A reset button, a keyboard lock, and status lights for clock speed and hard-disk-drive activity are located on the front panel of the system. Inside the 386C are six free expansion slots—four AT-type and two PC-type. This allows plenty of room for adding a fax board, a modem, and a scanner.

The speed and adaptability of the 386C can give you all the computing power you may ever need. The price may seem daunting, but this computer could, in the long run, prove to be an economical choice.

—HENRY F. BEECHHOLD

REVIEWED IN THIS ISSUE

Computer:

AST Premium/386C Model 390

Printer:

Hewlett-Packard DeskJet Plus

Copier:

Mita CC-20

Fax Machine:

Relisys Tefax Model RA2110P

Telephone:

Cobra Intenna Model CP-480

Near-Laser Quality for Less

CIRCLE READER SERVICE 102

Hewlett-Packard DeskJet Plus

Hewlett-Packard Co., 19310 Pruneridge Ave., Cupertino, CA 95014; (800) 752-0900

SUGGESTED RETAIL PRICE: \$995

RATING: ★ ★ ★

HARDWARE REQUIREMENTS: IBM PC/XT/AT or compatible with parallel or serial port and cable

PRINT BUFFER: 16K

TYPE: Thermal inkjet

DRAFT SPEED (PICA): 240 cps

LETTER-QUALITY SPEED (PICA): 120 cps

PAPER TRAYS: 1 (100 sheets)

GRAPHICS RESOLUTION: 300 by 300 dots per inch (dpi)

BUILT-IN FONTS: 10

FONT-CARTRIDGE SLOTS: 2

INTERFACES: Parallel and serial

PRINTERS EMULATED: HP DeskJet, HP Laser-Jet; optional emulation cartridge for Epson FX-80 (\$40)

OPTIONS: 128K RAM cartridge (\$150), 256K RAM cartridge (\$200), font cartridges (\$75–\$95), soft fonts (\$95 each), dust cover (\$35)

DIMENSIONS: 17.3 by 14.8 by 8 inches

WARRANTY: One year

When Hewlett-Packard introduced the DeskJet last February, it sent shock waves through the printer industry and thrilled consumers. For the first time, near-laser-quality output could be obtained for less than \$1,000. The new, faster DeskJet Plus, which adds more features for a small increase in price, is another winner.

On the surface, the DeskJet Plus looks just like the original DeskJet, but inside are

To be, or not to be

To be, or not to be

Can you tell the difference between these two printouts? (Both were enlarged for readability.) The laser's is on the top and the DeskJet Plus's is on the bottom.



welcome improvements. The Plus prints text twice as fast as the original and prints graphics almost five times faster. Additional built-in fonts (10 instead of 4), with improved character spacing, are similar to those of a laser printer. Font cartridges with bigger point sizes (up to 30 points) and memory cartridges with 256K are also available.

The DeskJet Plus occupies the same amount of desk space as a dot-matrix printer; however, you won't need a printer stand—the Plus has a built-in paper tray that holds up to 100 sheets of letter- or legal-size paper. (Copier paper will work fine; just make sure the correct side is down when you load it into the tray.) To save space, the output tray is located directly above the paper tray. You must feed in envelopes (#10 only) manually.

The heart of the Plus is a disposable Ink Print Cartridge (\$18.95) that contains the ink and the heat mechanism needed for printing. Cartridge life is about 400 pages of text, less for graphics. Images are formed by ink drops that are shot onto the paper and then thermally dried. Although maximum resolution is 300 by 300 dpi, graphics images are still not as sharp as those of a laser printer. But text is almost indistinguishable from a laser's (see sample printouts).

The DeskJet Plus has two cartridge slots to be used for adding fonts, RAM, or printer emulation. It works with all software that supports the HP DeskJet, and most that supports the LaserJet series.

Even though the suggested list price of the original DeskJet has been dropped from \$995 to \$795, the full-featured DeskJet Plus (only \$200 more) is a better buy. The DeskJet Plus can't replace a laser printer, but for the price, it's a good alternative. Is anyone interested in buying a hardly used 24-pin dot-matrix printer? —STEVEN C.M. CHEN

Low-Cost Copier

CIRCLE READER SERVICE 103

Wita CC-20

Mita Copystar America, Inc., Heights Plaza, 777 Terrace Ave., P.O. Box 813, Hasbrouck Heights, NJ 07604; (201) 288-6900

RATING: ★ ★

SUGGESTED RETAIL PRICE: \$1,395

TYPE: Desktop copier

PAPER SIZE: Maximum 8.5 by 14 inches; minimum 2 by 3.5 inches

PAPER CASSETTE: 100 sheets

SPEED: 8 pages per minute

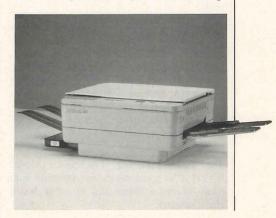
FEATURES: Up to 19 copies of a single original; toner/developer cartridge available in black, red, blue, green, and brown

DIMENSIONS: 16 by 16 by 8 inches

WARRANTY: 90 days

Making clear, clean copies is the essential task of all copy machines. The Mita CC-20 plain-paper copier produces good copies, but the setup is a challenge if you don't read the documentation carefully.

For example, installing the toner/develop-



HARDWARE REVIEWS

er cartridge requires quite a few steps. Read the manual before attempting to open the copier so you don't break any parts by forcing it open.

The model I reviewed did not survive cross-country shipping very well. Two hours of on-site repair work were necessary to make it operate. (Customers can get service from the dealer they purchase the unit from.) But once the machine was working, it made high-quality copies.

The CC-20 does not enlarge or reduce, nor does it include an automatic paper feeder. Designed for low-volume use, the CC-20 copies originals up to 8.5 by 14 inches.

I was impressed with the CC-20 until I began calling dealers to find out the current street price. (The CC-20 carries a suggested list price of \$1,198, plus \$197 for the disposable toner/developer unit.) I called four Mita dealers, and to my surprise, none of them carried the CC-20. One dealer offered to special-order it for full retail price. Another suggested that I buy a lower-priced model from another manufacturer. One dealer would not handle it at all. Three of the four dealers suggested I buy the Mita 1205 copier instead. At \$1,895 (and heavily discounted to \$1,195), it is competitive with the CC-20.

Once the CC-20 became operational, it produced excellent copies. However, given its reputation among Mita dealers and general unavailability in my area (Southern California), I am leery of it. -BOB CULLEN

Fax + Scanner

CIRCLE READER SERVICE 104

Relisys Tefax Model RA2110P

Relisys, 320 S. Milpitas Blvd., Milpitas, CA 95035; (408) 945-9000

RATING: ★ ★ ★

SUGGESTED RETAIL PRICE: \$1,495

HARDWARE REQUIREMENTS: IBM PC/XT/AT or compatible

COMPATIBILITY: Groups 2 and 3

DOCUMENT WIDTH: 8.5 inches

RECORDING PAPER SIZE: 8.5 inches by 98 feet (roll)

MODEM SPEED: 300 to 9600 baud

PRINTING METHOD: Thermal

DISPLAY: Two-line, 32-character LCD

RESOLUTION: 200 by 200 dots per inch (dpi)

AUTOMATIC DOCUMENT FEEDER: Five pages

FEATURES: Delayed transmission, polling, adjustable contrast

SOFTWARE INCLUDED: Tefaxcom

DIMENSIONS: 13.8 by 10.7 by 4.6 inches

WARRANTY: One year

The Tefax Facsimile Transceiver Model RA2110P is a standalone fax machine with many of the conveniences of a fax board and a scanner.

The Tefax has all of the standard fax functions: Group 2 and 3 compatibility, a 9600-baud modem, a built-in telephone, and a multiple-page document feeder. It can automatically and manually receive documents, copy documents, store frequently used phone and fax numbers, poll (for example, fax machine A calls fax machine B to receive a document from B), and delay transmission until a preset time.

Tefax can also be used to scan printed material into your computer. The image quality is comparable to that of a conventional scanner. This function has made compiling my community newsletter a breeze. Professional printing costs are now eliminated because I can save the text and the newsletter's official logo (which I scan in) to disk and print out the finished product on my dot-matrix printer.

The supplied software, Tefaxcom, and 25-pin serial cable (a 9-pin adapter is now being shipped with the unit as well) allow you to use Tefax as if it were an installed fax board. Tefaxcom is simple to use but it isn't memory resident. Should the fax machine run out of paper, it automatically routes the fax being received to the computer, but if you're working on something else, this ability is useless. (An upgraded version of Tefaxcom, to be released this month, will allow background processing.)

Most fax machines targeted toward the home office have a document feeder with a



five-page limit. This means that if you're faxing more than five pages at a time, additional pages must be fed by hand. And if a page jams, the phone connection is usually lost-requiring you to start from the beginning. Although Tefax's feeder has the same five-page limit, you can scan the pages into the computer first and then do the faxing.

Besides the software not being memory resident, I think the only feature missing on the Tefax is an answering machine—one that automatically determines whether to record a message or print a fax. Then it would be almost perfect. —STEPHEN MILLER



Unique Cordless Phone

CIRCLE READER SERVICE 105

Cobra Intenna Model CP-480

Cobra Electronics Group, Dynascan Corp., 6500 W. Cortland St., Chicago, IL 60635; (312) 889-8870

RATING: ★ ★ ★

SUGGESTED RETAIL PRICE: \$130

TYPE: One-line cordless

FEATURES: Pulse and tone dialing; Flash; lastnumber redial; paging; internal antenna; low-battery indicator

DIMENSIONS: 5.8 by 9 by 2 inches

WARRANTY: One year

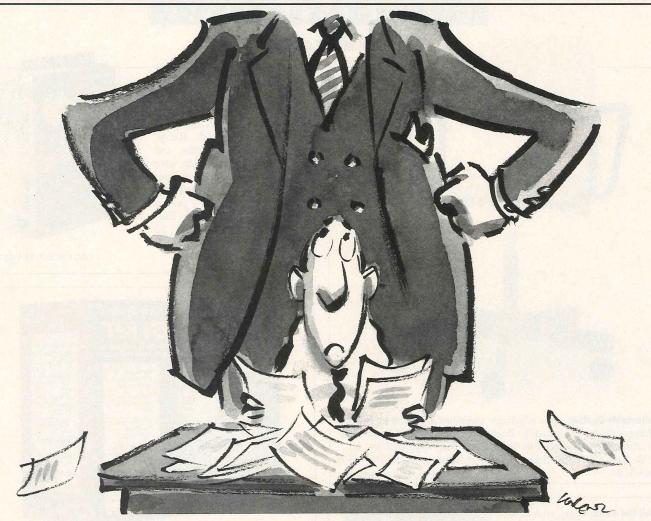
Cobra has developed a remarkable cordless telephone—the Intenna. It has eliminated the antenna that usually protrudes from the handset of a cordless phone by hiding it inside the handset. Now there's nothing to bend or break. This new design doesn't affect the size or weight of the handset—it is still lightweight and sleek-nor does it disturb the sound quality.

The Intenna is a fairly basic cordless phone: It doesn't include such options as a speakerphone, intercom, or speed dialing, although it does have pulse and tone dialing, a Flash button (for switching calls when using call waiting and other phone-company services), and auto-redial. Pressing the Page button on the base of the phone emits a loud beep from the handset—useful for locating an errant handset or summoning the handset user.

I found the sound quality to be clear near the base unit, but steadily deteriorating beyond 150 feet. Another disadvantage is that cradling the handset on your shoulder blocks the internal antenna signals, reducing range and reception quality.

The Intenna's handset must sit in the base unit for 12 hours to recharge fully. It will then be fully operational away from the base unit for at least five hours. A low-battery indicator light and a beep will warn you when batteries need recharging. Cobra expects the batteries to last two to three years.

The Intenna is easy to use, and the handset seems durable. My main complaint is that the buttons on the keypad have a loose feel and do not always respond unless they are pressed firmly in the center. But overall, it's a pleasant phone. —STEVE USDIN



If your job is to pick a fax machine, here's how to keep your job.

There are so many ways to pick the wrong fax today, it's not always a thrill to be chosen to choose one.

So here's a tip: Look for good technology. It's the best feature you can buy.



More often than not, this means AEG Olympia. In our native Germany, where technology is a number one passion, we're the number one business machine company.

Like our typewriters, printers and shredders, our facsimiles do what they're supposed to do, quietly, efficiently and dependably. And whether you want our lightweight, compact portable that works like a watch, or one of our high speed, top-of-the-line machines that do everything but make coffee, they're backed by a competent, responsive dealer network.

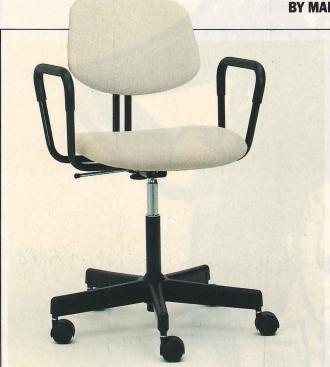
Before you go off half-faxed, find out what good technology is. Call 1-800-999-6872.

Or write AEG Olympia, Box 22, Somerville, NJ 08876-0022. Where technology counts, business counts on us.



OFFICE ESSENTIALS

BY MARIE ALVICH



Adjustable Seating. This adjustable chair has a pneumatic lift that changes the height instantly. Back adjustments add to its flexibility. Available in three colors. \$190. From Ring King Visibles, Inc., P.O. Box 599, 2210 Second Ave., Muscatine, IA 52761; (319) 263-8144.

Call the Valet. Carry your disks in this slim *Dual Pak Disk Valet* case. Available in four colors, it holds five 5.25-inch disks and five 3.5-inch disks simultaneously. \$18. From RamStar Group, Inc., 5996 Paradise Point Dr., Miami, FL 33157; (800) 327-2303; (305) 233-1991 in Florida.

CIRCLE READER SERVICE 107





Is Your Monitor Turned on by Your Computer? This special adapter cord allows you to turn on your computer and your monitor with the flip of just one switch. The cord plugs your monitor into your IBM PC or compatible computer; the monitor then depends on the computer for power. \$10. From Mark Twain Computer Mfg. Inc., 900 N. Third St., La Grange, MO 63448; (314) 655-2260; (800) 637-2984.

CIRCLE READER SERVICE 108

MARIE ALVICH is associate technical editor for HOME-OFFICE COMPUTING.

Clip and Save. Purchase a Curtis Jewel Series Surge Protector by August 31 and get a Curtis Clip, a \$6.95 value, free! The Diamond, Emerald, Ruby, Sapphire, Diamond Plus, and Ruby Plus models help save your equipment as well as your data by protecting electronic equipment against power surges. \$60 to \$120. From Curtis Manufacturing Co., Inc., 30 Fitzgerald Dr., Jaffrey, NH 03452; (603) 532-4123.



CIRCLE READER SERVICE 109



A, B, C, D... This Filing System Starter Kit contains all the supplies needed to set up and maintain an efficient color-coded, alphabetical filing system. \$53. From Smead Manufacturing Co., 600 E. Smead Blvd., Hastings, MN 55033; (612) 437-4111.

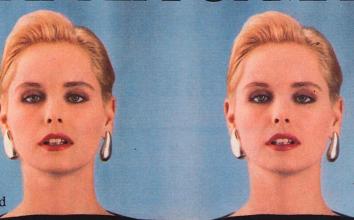
CIRCLE READER SERVICE 110



Pick a Card, Any Card. These three-by-five-inch reference cards provide fast access to software commands, syntax, and other information. Easy-to-read sets of *Computer Quick Cards* are available for Lotus 1-2-3 v2.01 and *Symphony, WordPerfect* v4.1 to 5.0, dBase III Plus, MS-DOS/PC-DOS to v3.3, and DisplayWrite 4. \$16 to \$25. From Computer Processing Systems, P.O. Box 5, West Jefferson, OH 43162; (614) 879-7431; (800) 222-3630; (800) 222-3664 in Ohio.

REPEAT PERFORMANCE

1987: The Sharp brand outsold all fax machines in 1987—for good reasons. Sharp takes the most advanced technology and makes it affordable. Sharp has a full line of networkable machines designed to grow with your business. What did Sharp do for an encore?



NO.1 FAX

1988: The Sharp brand outsold all other fax machines—again. Sharp machines offer the features—auto-dial, autofeed, auto-cutter, send-later and sixteen-shade halftone transmission—that every business wants at a price they can afford. To learn more, call 1-800-BE-SHARP

TO STAY NO.1
IN FAX FOR 2 YEARS, YOU
HAVE TO BE SHARP.

FROM SHARP MINDS COME SHARP PRODUCTS

Sophisticated Desktop Publishing For Graphic Novices

Plus: An MS-DOS Word Processor, a Mac Drawing Program, and a Unique Database

Our reviews of application software use shorthand to describe several of the details associated with any package. This is particularly true under "System Requirements" where the minimum system configuration is noted—so we have provided the following table of computers for you to refer to as needed. Hardware, software, and memory are required unless noted as "recommended" or "optional." When more than one computer is listed under "System Requirements," the machine marked with an asterisk (*) is the type on which the software was reviewed. Requirements are not listed where obvious (for instance, printers with word processors or modems with communications programs). Operating system requirements, such as MS-DOS or the Macintosh System file, are listed only when they're not the standard, minimum requirement (DOS 2.0 for IBM PC or compatibles, System 3.2 for the Macintosh, or ProDOS for the Apple II). For those computer systems that can use both 5.25- and 3.5-inch disks (IBM PC and PS/2 or the Apple II), we've listed only those disk sizes that are either supplied with the software or available at no extra cost from the publisher. Since most productivity software is not copy protected, we have indicatedwith the letters "CP"—only those programs that are copy protected. The version listed is the version reviewed; publishers may release subsequent versions at any time.

1	
Designation	Models
128K Apple	IIe/IIc/IIGS (in IIe/c mode) and compatibles
128Ke Apple	IIe (enhanced ROM)/IIc/IIGS(in IIe/c mode)
Apple IIGS	IIGS only
IBM PC, PS/2	PC/XT/AT, PS/2 and compatibles
128K Macintosh	128K/512K/512Ke/Plus/SE/II
512K Macintosh	512K/512Ke/Plus/SE/II
512Ke Macintosh	n 512Ke/Plus/SE/II
1MB Macintosh	Plus/SE/II

Ratings Key: ○ Poor; ★ Average; ★★ Good; ★★★ Very good; ★★★★ Excellent.



Dozens of impressive, professionally designed templates, such as this one for a newsletter, make QuarkStyle unique among page-layout programs.

QuarkStyle

VERSION REVIEWED: 1.0

SYSTEM REQUIREMENTS: 1MB Macintosh; hard-disk drive; System 4.1 or higher PUBLISHER: Quark, Inc., 300 S. Jackson St., #100, Denver, CO 80209; (303) 934-2211

PRICE: \$295

OVERALL PERFORMANCE: ★ ★ ★
DOCUMENTATION: ★ ★

ERROR HANDLING: ★ ★ ★
EASE OF USE: ★ ★

SUPPORT: ★ ★

Realizing that many people never learned basic graphic-design skills, several publishers offer templates with their desktop-publishing (DTP) programs. Taking this idea one step further, Quark, publisher of *QuarkXPress*, introduced *QuarkStyle*, the first Macintosh page-layout program dedicated to templates.

What is a template? In the world of DTP, it's a complete, predesigned page format, including grid, page layout, and type specifications. You simply add the text and graphics.

Eight nationally recognized graphic designers teamed with Quark to create Quark-Style's impressive templates portfolio. The package's 70-plus templates cover a wide range of communications—from business correspondence and small forms, such as purchase orders, memos, and invoices, to such longer publications as reports, manuals, and newsletters. From the outset, QuarkStyle saves you the cost of hiring graphic designers and layout artists.

That's because *QuarkStyle* truly lives up to the second half of its name: The templates are, with few exceptions, stylish. The design is of the highest professional caliber, and you can choose the look that suits your business best, from classic to avant garde.

And if you're willing to experiment with the templates—to go beyond plugging in your own business name, title, and address—you can pick up a good deal about design basics. Through observing the work of the professional designers, you can learn about combining fonts or about arranging blocks of text and graphics, for example.

Several features help make the program easy to use. For instance, the Open dialog box offers a convenient preview feature—select a template and a miniature image of it appears, complete with page dimensions. After opening a template, I found the Show/Hide Measurements command to be a particularly helpful layout tool. While you work, you can see on-screen measurement information in a bar across the bottom of your working page. This saves you the tedium of first selecting such elements as boxes or graphics and then calling up menus to determine their specific dimensions.

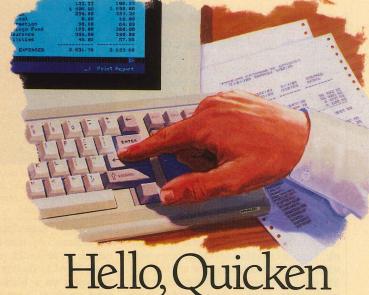
Three guides accompany *QuarkStyle*—one for the templates, one for reference, and a user's guide. Each is designed attractively and written in a light, accessible style that encourages frequent reference and quick learning. You'll also find on-line help, with information on key command sequences and descriptions of menu commands.

Unfortunately, the *Templates Guide* does not document each template's style sheet. For example, to make an envelope template work with my corporate identity, I needed to change the type size and style of the company-name placeholder. To locate styles information, I had to open *QuarkStyle*, open the envelope template, select the company name, then choose the Edit Styles command to see a dialog box—the only source of information for alignment, leading, type size, and type style specifications. This creates a major inconvenience when you're planning template modifications.

As a rule, though, it's difficult to find much wrong with *QuarkStyle*'s general operations. The program refused to bomb no matter how I punched the wrong key or tried to print to nonexistent ports; instead it offers

ay Goodbye to Financial Hassle!





hy waste time doing your finances? Quicken slashes time and effort every month...perfectly organizes your finances...and provides instant insight into your money matters.

Breeze Through Financial Chores

Quicken takes the drudgery out of routine finances. It automates everything from bill paying to bookkeeping...reconciliation to reporting. Quicken does in minutes what used to take hours.

Quicken actually learns your regular bills and reminds you when to pay them. Just confirm payment amounts, and in seconds, Quicken performs 14 bookkeeping steps, categorizes expenses, and hands you printed checks addressed for mailing. Or, pay your bills using CheckFree, the nation's electronic payment system. And, Quicken keeps perfect records of all your handwritten checks.

A Bigger Picture with Smaller Effort

Quicken automatically organizes your finances. Imagine always knowing how much money you have...and exactly where it's going. At the press of a button, Quicken generates insightful reports such as Income and Expense, Cash Flow, Budget vs. Actual, Balance Sheet/ Net Worth, Job Costing, and more.

Relax at Tax Time

Stop dreading tax time. Quicken keeps

important tax data at your fingertips automatically. In seconds, you can print an itemized list supporting your deductions. Plus, Quicken links directly to top selling tax software like Turbo Taxº and J.K. Lasser's Your Income Tax®

NEW VERSION 3.0 FAR MORE THAN A CHECKWRITER

Quicken is now even easier, faster, and offers 50 new features, including:

- New credit card, cash, asset, and liability accounts for a complete financial picture.
- Now combines information from all accounts into consolidated reports
- New reports, including Tax Summary and Net Worth/Balance reports...
- · New wallet-size checks
- Variable monthly budget report
- · Data import and export
- Canadian dates and tax categories Links with CheckFree,[™] the nation's electronic payment system

The World's #1 Best Seller

Quicken is the best selling business and personal financial software in the world. Bill Howard of PC Magazine (December 27, 1988)



says, "Quicken is about as good as software getspowerful, affordable and easy to use." Broadway playwright ("Mame") Robert E. Lee remarks, "This astonishingly

Best of 1988

simple program...is truly true to its name. Indeed, it does quicken the time required for routine bookkeeping."

No Computerese or Accounting Mumbo Jumbo

Quicken is so easy, you're up and running in minutes. That's because the whole program looks and works just like the paper checkbook and register you've always used. Quicken doesn't change how you do your finances, only how fast you finish them.

Powerful Business Features

Over half of Quicken's customers use it for small business bookkeeping. Quicken produces financial statements such as Profit and Loss, Balance Sheets and other useful management reports. It forecasts your cash flow, and tracks A/R, A/P, payroll, jobs, clients, properties, and more.

SPECIFICATIONS

Software Compatibility: Imports from Check-Free and ASCII. Exports to ASCII, Lotus® 1-2-3® Symphony,® Quattro® Excel®

Hardware Compatibility: All IBM® PC, XT, AT® PS/2® and compatibles with 320K RAM and DOS 2.0 or higher. Works with your printer and monitor; we guarantee it.
Capacity: Unlimited number of bank accounts and transactions (subject to available disk space). Maximum amounts to \$9,999,999.99.

Other: Unlimited FREE technical support. Not copyprotected. Checks are preapproved by all financial institu-tions in the U.S. and Canada. Sample checks and order form in Quicken package. Also available for Macintosh and

CheckFree Electronic Bill Payment: Pays all bills. Works with all U.S. financial institutions. Modern and software required. Special offer available in the Quicken package. A service CheckFree Corporation.

Ouicken is available at most computer and software stores

Try Quicken FREE for 30 Days

Order from the coupon below, and if you're not completely satisfied for any reason, simply return it for a full no-questions-asked refund. So, why wait? Say good riddance to financial hassle, and order Quicken today.

Send in the coupon, or call 1-800-624-8742 U.S. and Canada.



Yes, I want to say goodbye to financial hassle and try Quicken.
If I'm not completely satisfied, I may return it within 30 days for a full refund. Quicken Version 3 for IBM and compatibles, U.S. \$59.95, includes free shipping by air. California residents, please add sales tax. For coupon orders, allow 10 days for delivery (longer to Canada).

Mr / Me / Miss / Mrs / Dr

Address		
City	State	Zip

Quicken Version 3 and IBM and compatibles ☐ 51/4" disk ☐ 31/2" disk

Preferred payment method (check one)

☐ Check enclosed (no purchase orders or COD, please) □ Visa ☐ MasterCard ☐ American Express

Card No

540 University Ave. Palo Alto, CA 94301 Or, call: 1-800-624-8742 in U.S. and Canada for charge card orders.

Exp. Date

Current Quicken users: To upgrade, call the 800 number above.

SOFTWARE REVIEWS

ample warnings when you're about to go astray.

Curiously, QuarkStyle's major drawback may be its appealing template designs. The templates are so attractive that several thousand users could decide to use them without considering the need for a corporate identity: the graphic rendering or logo of your company's name—along with font, type size and type style—that is applied to all materials pertaining to your business. (See "Grow Your Business with a Professional Identity" in this issue for more about creating a distinctive graphic identity.)

Even if you already possess some design skills plus a logo or company name, remember that these templates may not meet your needs, even with modifications. For example, I append a tagline to my company name when producing letterhead for my business. Yet many of QuarkStyle's templates require much shorter names-they would look awful if I altered them to accommodate my full company identity. This is not just Quark-Style's problem—it's a problem inherent in using any template. No matter how good a page-layout and templates program Quark-Style is—and it is very good in most respects-it cannot guarantee professional results for every company. This is definitely a program you'll want to test-run.

—LESLIE SIMONS

Total Word

VERSION REVIEWED: 1.2

SYSTEM REQUIREMENTS: 512K IBM PC or PS/2; hard-disk drive; CGA, EGA, VGA, Hercules, MDA (Page Preview not available with CGA or MDA); 5.25- or 3.5-inch

PUBLISHER: Volkswriter, Inc., 411 Pacific St., Monterey, CA 93940; (408) 373-4718

PRICE: \$495

OVERALL PERFORMANCE: ★ ★

DOCUMENTATION: ★ ★ ★

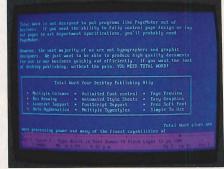
ERROR HANDLING: ★ ★ ★

EASE OF USE: $\star \star$ SUPPORT: $\star \star \star$

Let's face it, any new word processor entering the PC marketplace faces stiff competition. In this software category, good is simply not good enough; to be successful, a new program must be great. Although *Total Word* from Volkswriter, Inc. (formerly Lifetree Software) is a decent word processor that includes several features commonly associated with desktop-publishing (DTP)

Total Word uses a character-based interface. Consequently, while you're composing a document, its final appearance is only approximated on your screen. On a color monitor, for example, formatting attributes—such as boldface, underlines, italics,

programs, it doesn't break any new ground.



Like many new word processors, Total Word includes features—such as multiple columns and PostScript support—commonly found in desktoppublishing programs.

superscripts, subscripts, and page breaksare indicated by user-defined color combinations. You could, for instance, instruct Total Word to display boldface text as red characters on a black background, underlined words as green-on-black, and so on. While this is not a critical flaw, the software market appears to be shifting toward socalled WYSIWYG (What-You-See-Is-What-You-Get) applications—software that actually emulates the printed page onscreen. Witness, for example, the success of such graphic-based programs as Excel and PageMaker, both of which run under Microsoft Windows. On the positive side, character-based programs tend to possess speed advantages over their graphical counterparts. Total Word is fast; and being a Word-Star user from way back, I wasn't turned off by Total Word's lack of a WYSIWYG interface.

Another Total Word strength is the great control it gives you over the contents and final appearance of a document. Unfortunately, the program's command structure is anything but intuitive. For instance, you mark the beginning of a superscript with a Shift-F2 key combination. To end the superscripted text, however, you press Shift-F1, the same key combination used to mark the beginning of a subscript. Other commands are similarly confusing or, worse yet, obscure. For example, Shift-F9 turns on underlining; that's not an inherently bad key combination, mind you, but it's certainly not an obvious choice for the function it performs. Also, displaying the help index requires several keystrokes, which tends to interrupt the flow of your writing. I, for one, would appreciate a keyboard template or single-page quick reference sheet.

Total Word reflects a trend among word processors to pass themselves off as an alternative to DTP software by including some basic DTP features. Too often, however, when a word processor tries to imitate a DTP program, the steps required to access its DTP features are unnecessarily complex, and the features themselves are fairly limited. Total Word proves no exception to this

rule. For example, formatting a *Total Word* document for multiple-column printing is a four-step operation—first you must display the Section Layouts Menu, then select Columns, then enter the number of columns you want, and finally install the new format. Even after performing this digital dance, you still see only one column displayed at any time on-screen.

One good DTP feature of *Total Word* is its support of style sheets. For example, after creating a four-column layout using the steps described above, you can save that layout to a style-sheet file. You can then use that file as a template to format part, or all, of a different document in four columns. Building up a library of *Total Word* style sheets eliminates the need to constantly redefine layout information.

Total Word has its share of impressive features, including the ability to generate an index and table of contents for your document, a comprehensive 170,000-word spell-check dictionary, an equally impressive 300,000-word thesaurus, support for multiline headers and footers, footnoting capabilities, and a Windows command. This last feature lets you divide the editing screen into two windows; the second window can display either a different portion of the current document or a second file altogether. I found this feature useful when working on a portion of my document that referenced information elsewhere in the text.

The Total Word documentation comprises five books. The concisely written and wellorganized primary manual is divided into four parts: a Getting Started section that includes installation instructions and a beginner's tutorial, a multichapter user's guide, a reference section, and a comprehensive index. Additional documentation includes a 15-page quick reference guide, update information on version 1.2, and a book containing technical information on the various printers Total Word supports. A fifth book is designed to help current owners of Volkswriter (another word processor from the same publisher) familiarize themselves with Total Word's features.

The publisher is committed to supporting its product. *Total Word* comes with a 60-day, money-back guarantee—a rarity among PC programs. The company offers technical support to all registered users for the cost of a long-distance phone call. For example, when I had trouble configuring *Total Word* to run properly under *Desqview*, an MS-DOS multitasking environment, a single call to the Volkswriter support staff solved my problem.

In truth, I doubt that most people who already use a word processor will find much in *Total Word* that warrants abandoning their current favorite. One exception would be current users of the *Volkswriter* word

2609 Kootenai

Box 6886

Boise, Idaho 83707

Ever Wonder Why Users Awarded Act 1 Accounting Software Best Buy for 3 Years Running?

Flexibility, Integrity & Upgradeability Reasons Why Act 1 is No. 1

And three important reasons why users chose Act 1 as Best Buy for '86, '87, '88. The power of an accounting system is in its flexibility, integrity, and upgradeability. Act 1 has received a standing ovation

Flexibility. Act 1 has it! ACT 1 (Accounting 1) gives the option of over 700 flexible management reports. Plus, financial reports can be formatted up to 250 ways.

Integrity. ACT 1 is second to none. It never posts out of balance and always prints an audit trail.

Upgradeability. Act 1 has it! When adding another terminal, it is essential the single-user software be upgradeable to multi-user with record and file lock. Many accounting softwares are dead-ended with no

growth potential. Users know this is costly and dangerous to the integrity of a system. With Act 1, all data files are automatically upgradeable to ACT 2 (Accounting 2), which supports many popular LANS featuring time proven record and file lock for over six years.

Choose Act 1 for the best performance in accounting software.



Award winner for three consecutive years.



Shipping & Handling

- General Features
 "LOOKUP" Windows throughout.
- Menu driven with 2 help references.
- Multi company and report generator. Sample data files included.
- Complete audit trail.
- All modules can post to multiple profit centers. Fully integrated with single source entry.
- Date sensitive user-defined fiscal calendar.
- User defined financial reports. User can design checks, invoices, statements
- User defined chart of accounts, account numbers & stock numbers up to 15 alphanumerics.

- General Leger

 Allows for multi company ledgers.
- Unlimited multi-level accounts for departmentalized reporting.
- Allows recurring journal entries.
- User can process transactions 2 periods into
- next year.

 Allows budgeting.

- Inventory
 Supports LIFO, FIFO, weighted averages & standard cost.
- Supports markup, margin or list.
- Allows up to 4 places to right of decimal for

Accounts Receivable

- Open invoice and/or balance forward.
- Allows unapplied payments.
- Prints statements.
- Handles recurring accounts receivable.
- Supports partial payments & finance charges.
- Allows unapplied credit memos.
- Up to 5 user-defined aging periods.
- Mailing labels & reports with 7 different sorts.

- New Features Already Added in 1989

 1. FAST INSTALL includes a departmentalized chart of accounts with financial reports showing percentage analysis.

 2. A CASH FLOW REPORT as recommended by
- Certified Public Accountants.

Sales Invoicing

- Supports service or product oriented
- User defined tax tables including multiple
- Prints packing slips.
- Prints invoices.
- Alerts user to customer exceeding credit limit.
- Sales history reports.
- Automatic updating of inventory daily.
- Allows return credit memos.

- Accounts Payable

 Can post to 200 general ledger expense accounts per invoice.
- Prints checks.
- Automatically prepares payments.
- Supports partial and handwritten checks. Processes credit and debit memos.
- Computes discounts and records discounts

- Generates automatic payroll.
- Provides up to 8 user-defined rates.
- Allows post facto payroll.
- Allows distribution of payroll expenses to user-defined departments.
- Benefits and deductions are calculated on fixed
- Hourly amounts, percentage of gross or variable.
- Allows additions to gross which may be taxable, nontaxable or partially taxed.
- Handles 401K & cafeteria.
- All tax tables easily updated by the user.
- Handles payroll draws, per diem pay, contract & piece work, hourly and salary.
- Handles tip accounting. Prints checks and W-2's.

Hardware Requirements IBM PC* or compatible.

Hard disk required.

Unconditional 30 Day

Money Back Guarantee (from date of invoice)

applicable on all products bought directly from COUGAR MOUNTAIN SOFTWARE. Products must be returned in resalable condition. Restocking 15% fee applicable.



To Order Call (800) 344-2540

8:00-5:00 MST Monday-Friday Technical support is available via our Toll-Free

Telephone Number. Training seminars available

SOFTWARE REVIEWS

processor; they'd profit immensely from *Total Word*'s additional features. The real question, however, is whether enough first-time buyers will purchase *Total Word* to secure a niche for this program in the highly competitive word-processing market.

JACK NIMERSHEIM

Drawing Table

VERSION REVIEWED: 1.0

SYSTEM REQUIREMENTS: 1MB Macintosh; two 800K drives (hard-disk drive optional); System 4.1 or higher

PUBLISHER: Broderbund Software, 17 Paul Dr., San Rafael, CA 94903; (415) 492-3200

PRICE: \$129

OVERALL PERFORMANCE: ★ ★ ★

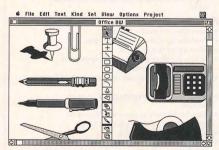
DOCUMENTATION: ★ ★ ★

ERROR HANDLING: ★ ★ ★
EASE OF USE: ★ ★ ★

SUPPORT: ★ ★

Drawing Table is an economical drawing program that includes many features—CAD (computer-aided design), colors, import and export capabilities, and scaling, just to name a few—normally found only in its more expensive brethren.

A drawing program's performance is measured by what you can do with the objects you draw and how you can combine them to make your picture. For instance, one of *Drawing Table*'s uncommon and useful features is the ability to bind text to an object. This lets you make text follow a curve or a circle. Even more impressive is the ability to manipulate that text after it is bound to the object—for instance, you can still change the circular text's font.



Drawing Table lets you move the icon-based tools menu anywhere on-screen.

You also have extensive control over the objects themselves. You can scale, reshape, duplicate, replace, and rotate them. You can move objects forward or backward and copy their attributes (such as color or text style) without copying the object itself. You can color, fill, move, align, or center objects.

Get the idea? You have tremendous control, and it is this control that helps you

create masterpieces. When you don't want to create your own graphics, you can import them, even if they were created by another program. *Drawing Table* accepts *MacPaint* files (bitmaps), PICT files (object-oriented graphic images such as *MacDraw* files), and EPSF files (encapsulated PostScript images such as *Adobe Illustrator* files). Broderbund has also included a collection of clip art to start you out. *Drawing Table* can export PICT files for use in other programs.

The documentation includes a manual, with tutorial and reference sections, and a quick-reference sheet. As you follow the tutorial's steps for creating a map and floor plan, you learn most of the program's features. The quick-reference sheet shows some of the menu choices and describes them in more detail.

One problem I had stemmed from the program's CAD-type features, particularly the ability to display an object's dimensions. Depending on the placement of the line that defines the object, those dimensions may be wrong. When I called the technical-support line—not a toll-free call—with this question, I was put on hold for a rather lengthy time. When I finally got through, the person I was talking with said that he was not the Drawing Table expert, but that he would have the expert call me back later. Later proved to be the next day. However, she worked with me until the problem was solved. She was friendly, knowledgeable, and persistent. Technical support seemed to be understaffed, but the staff they had was excellent.

I like *Drawing Table*. It has features that I never expected to find in a program in its price range, and it didn't sacrifice basic features to include the more esoteric ones. Unless you have some specialized need, such as professional-level CAD or gray-scale shading, *Drawing Table* deserves your consideration.

—BROOKS HUNT

IZE

VERSION REVIEWED: 1.0b

SYSTEM REQUIREMENTS: 512K IBM PC or PS/2; hard-disk drive; DOS 2.1 or higher PUBLISHER: Persoft, Inc., 465 Science Dr., Madison, WI 53711; (608) 273-6000

PRICE: \$445

OVERALL PERFORMANCE: ★ ★ ★

DOCUMENTATION: ★ ★

ERROR HANDLING: ★ ★ ★

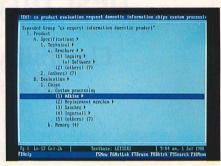
EASE OF USE: ★ ★
SUPPORT: ★ ★

Rows of stuffed filing cabinets have given way to massive data files. Yet, alas, you can't thumb through a data file.

Ah—but now you can use your *IZE*. And, yes, if you're going to use the soft-

ware, you'll have to endure more puns than that. The reference manual is called *Using Your IZE*. The installation manual is titled *Opening Your IZE*. The throbbing yellowblue-red-black packaging promises "greater vision." And so forth.

But if you've got an Everest of data to conquer, you may not notice the puns. You'll be more interested to know that, with *IZE*, you can put together your very own, personal, customized, PC-based version of a commercial database.



If you need to organize the information in large text files, IZE must be considered.

When you log onto a commercial database such as Dialog or Knowledge Index, you call up a particular data file—huge or small—and then search for particular text using keywords. For instance, you could go on Dialog, call up Medline, and say something like "find baldness." You could then spend the next few weeks downloading all the papers that mention baldness.

The idea is similar with IZE. You take a large ASCII text file (or a collection of smaller files) that you want to thumb through and import it into IZE, converting it into what IZE calls a "textbase." You then search it for a particular word or words—using the logical operators and, or and not just as you would with a commercial database—and IZE displays all the text that contains the word. You can then browse through your baldness file at leisure, searching for anything of interest.

The resulting text that *IZE* displays can be a paragraph, a sentence, a whole document, text that came after a particular heading, or text between two specific strings—depending on how you set up the import procedure. *IZE* is very flexible in this area.

But *IZE* also goes a step further than simple Dialog emulation. As text files are imported into the program, *IZE* can match their contents against a list of keywords you've already specified, indexing the contents automatically.

Instead of simply displaying the text that contains the words you searched for, *IZE* arranges the keywords as an outline. The word you searched for will be the main header. The first subhead will be the keyword that appeared most often in the blocks

Problem

Locate the Problem Fast with System Sleuth™

Your computer is a unique harmony of hardware and software. When things run smoothly, everything's terrific. When they don't ... you have to guess at a solution as well as the problem! Stop the guessing.

Get System Sleuth, an easy-to-use but powerful toolbox of valuable system diagnostic aids all rolled

into a single software utility.

Now you can troubleshoot system problems in a flash. For the first time you can get fast, accurate information about the current status of your entire system as well as any or all installed devices.

Novice or expert users can finally locate problems on their own and be able to talk intelligently with tech support staffs. You can even identify potential conflicts with your new add-in boards BEFORE opening your computer!

Accidents can't happen with System Sleuth. Explore your system with the peace of mind that everything is left just as it was discovered. View the contents of files knowing that no slip of the cursor

can change a thing.

System Sleuth retails for only \$149.00. "... System Sleuth, an absolutely wonderful new utility... It shows an even better idea than IBM's on how to help the PC user and those who try to keep him up and running.

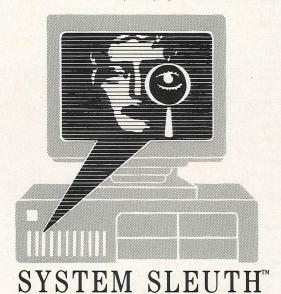
—Jim Seymour, PC Week, Dec. 1988 "...a Great Tool for technical analysis..."

-Info World, Oct. 1988

 $\lq\lq.This\ is\ one\ of\ those\ programs\ that\ I\ didn't\ know\ I$ needed until I got it; now, what with all the hardware I try out around here, I use it all the time, and I can't think how I got along without it." -Jerry Pournelle, Byte Magazine, May, 1989

For Orders call: 1-800-999-1557 For Information call: (213) 987-2000

23704-5 El Toro Road, Suite 348 El Toro, CA 92630 Telephone: (213) 987-2000



PC Diagnostic Software

Get Automatic Formatting and Increased Speed with FloppyDRIVER™ The Final Floppy Drive Solution.

For the first time since diskette met data, you can actually update your floppy disk drive into the next century! Get complete automatic formatting and 500% increased disk drive efficiency with FloppyDRIVER, the unique software utility solution from DTG, Inc. Imagine formatting diskettes without exiting your application program. FloppyDRIVER's convenient

pop-up feature allows you to continue your work AND automatically format at the touch of a button. FloppyDRIVER takes care of the media specifics, even 3.5" drives without BIOS support. It is also intelligent enough to inspect each diskette and automatically format the disk ONLY if it is unformatted. Even proprietary formats will not be reformatted unless you choose to.

Whether you are reading, writing, creating, saving or copying files, FloppyDRIVER gives you dramatic improvements in speed. Reduce the time required to read

improvements in speed. Reduce the time required to read disk data by as much as 85%. Imagine your diskettes working up to 500% faster without any special commands. FloppyDRIVER retails for \$89.95. At that price, FloppyDRIVER has to be the greatest value in software today! "It's rare to find a utility that you can't live without. But I found one... FloppyDRIVER sold by DTG, Inc. is such a program." —Info World, Vol. 11, Issue 7 "... few products can provide such obvious performance improvement at such a low price."
—Mark Brownstein, Info World "It lets you use unformatted disks with impunity.

"It lets you use unformatted disks with impunity, because it absorbs data into its buffer and lays that data on the disk as it formats... it lets you format them as they are being formatted...not a byte of data was lost."

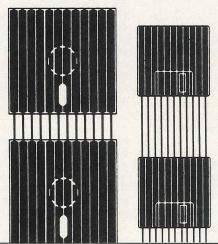
With them as they are being formatted...not a byte of data was lost."

Winn L. Rosch, PC Week

For Orders call: 1-800-999-1557 For Information call: (213) 987-2000

23704-5 El Toro Road, Suite 348 El Toro, CA 92630 Telephone: (213) 987-2000

Diskette Utility Software



SOFTWARE REVIEWS

as you've defined them, the next ad will be the next most common, and orth, until you get to individual-item ies, which will be the non-repeated keyrds that appeared in your textbase. If you we downloaded 2,000 articles on baldness, our *IZE* outline might look like this:

- 1. Baldness
 - A. Cure
 - 1. Breakthrough
 - B. Treatment
 - 2. Availability

The result is a customized index, so that you don't have to actually read each file to see what would be of genuine interest.

IZE also knows that the most often repeated keywords may not be the most important ones; it has an option that prevents selected words from being used as subheads. For instance, in our baldness textbase the word scalp might appear in every paragraph, so treating it as a subhead would trap of using the terms coined by the proresult in a meaningless outline. trap of using the terms coined by the programmers to describe the software's fea-

If your personal archive of material is not entirely in ASCII format, there are "hot links" that translate files from about 40 leading word-processing, spreadsheet and project-management programs, such as WordPerfect, WordStar, and Lotus 1-2-3.

Each textbase can contain up to 32,000 texts, or files, and each text can be 32K long; disk capacity is your main limitation. There are also facilities for exporting and printing the text and for typing text directly into a textbase. You can also designate keywords manually while displaying a text.

Controlling *IZE* is not as easy as it might be. Even important operations, such as importing a file, require that you enter arbitrary command sequences and flip back and forth between cryptic references in the manual. But the manual is difficult to approach. The writers seem to have fallen into the old

trap of using the terms coined by the programmers to describe the software's features, rather than coming up with clear, functional descriptions. For instance, they keep referring to a "keychanger" that doesn't change anything, especially not keys—it assigns keyword status to words in the text that match words on the "keychanger" list. As is too often the case, reading the manual is like getting initiated into the programmers' private club.

But if you're serious about it, you'll learn the system soon enough—and serious users are the only ones who should pay attention to *IZE*. Sure you could do your contact list or mailing labels with *IZE*, but it would be overkill, especially for the price. However, if you're a lawyer with reams of documents to sift through, or a researcher with years of reports to correlate, then *IZE* could indeed lead you out of darkness.

-LAMONT WOOD

TITLE/PUBLISHER PRICE/VERSION	SUMMARY	SYSTEM REQUIREMENTS		TIN D	GS EH	EU	S
Acta Advantage Symmetry Corporation 761 E. University Dr. Mesa, AZ 85203 (602) 844-2199 \$129 v1.0	Takes wonderful advantage of the Mac's graphic, mouse-based interface to make outlining operate smoothly. For instance, if after typing a new entry I realize that it should actually be listed under the main heading, all I need do is drag the new entry to its appropriate, indented position on screen. Acta comes in both stand-alone and desk-accessory versions (the stand-alone gives you more control over typestyles), which makes it versatile to use. —David Hallerman	512Ke Macintosh. System 6.0 or higher required for ''multiple typestyle in topic'' feature.	* * * *	* * * *	* * *	* * *	***
Disk Technician Advanced Prime Solutions Inc. 1940 Garnet Ave. San Diego, CA 92109 (619) 274-5000 \$190 v5.22	Provides periodic maintenance of your hard-disk drive through regular checkups, ultimately keeping data away from the disk's unstable sectors. Tests each disk sector for the ability to read and write perfectly. If a problem is detected, DTA will try to repair the sector—if the repair fails, it automatically relocates the data that's stored there and blocks the sector from future use. As an adjunct to backing up your hard disk, DTA—although somewhat technical—can be indispensable. —Charles Bermant	512K IBM PC, PS/2. Hard-disk drive. DOS 2.1 to DOS 3.32. 5.25- or 3.5-inch.	* * *	* * *	* * *	* * *	***
The Norton Utilities/Advanced Edition Peter Norton Computing, Inc. 100 Wilshire Blvd. Santa Monica, CA 90401 (213) 319-2000 \$150 v4.5	Performs functions that Microsoft and IBM forgot when writing DOS (such as File Find for locating lost files anywhere on your drive) and replaces some DOS functions (such as the enhanced directory command). Two of my favorite utilities—Norton Disk Doctor and Safe Format—help me prevent and solve disk disasters. The package's great strength is in recovering accidentally deleted files; the 158-page Troubleshooter manual was especially helpful when I erased an important file by mistake. —Pasquale Cirullo	256K IBM PC, PS/2. Hard-disk drive recommended. DOS 2.0 to DOS 4.0. 5.25-and 3.5-inch.	* * *	* * * *	* * *	* * *	* * *
TaxView Planner 1988-1992 SoftView Inc. 4820 Adohr Ln., Suite F Camarillo, CA 93010 (805) 388-2626 \$119 v1.0	No one enjoys paying taxes, but if you want to pay less next April, you might want <i>TaxView Planner</i> —a program that helps you analyze your tax options over a five-year period. For example, you enter anticipated income, expenses, and deductions into on-screen IRS forms and schedules, and the program then lets you try different tax scenarios. The program's main problem is that it calculates much too slowly. — <i>Brooks Hunt</i>	512K Macintosh.* Two drives recommended. Also for 512K IBM PC, PS/2. Hard-disk drive. Mouse. CGA, EGA, VGA, Hercules. DOS 3.0 or higher. 5.25-inch (1.2MB) or 3.5-inch (720K).	* *	* * *	* * *	* * *	* * *

FAMILY COMPUTING.

Can You Read This Article in One Minute or Less?

You or Your Child Can Get Fast Results from Speed-Reading Software

BY TAN A. SUMMERS

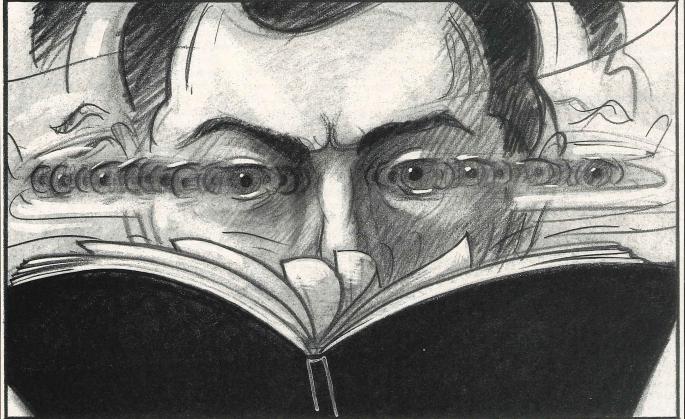


ILLUSTRATION BY WILL

he average person will read this article in about five minutes. Chances are, you'll read it a little faster; statistics show that people who use computers tend to read faster than the average. But what if you could read it in less than a minute? Or read the entire magazine in half an hour—and still know what you read?

I became interested in speed-reading when my 12-year-old son, Howard, begged for a computer program that would help him read faster. We found three: *The Evelyn*

Wood Dynamic Reader from TimeWorks, Speed Reader II from Davidson & Associates, and Simon & Schuster's Speed Reading Tutor IV. Each follows a slightly different philosophy, but all agree that the brain is faster than the ear—we can recognize and understand whole phrases simultaneously, instead of mentally "hearing" the words one at a time.

I was skeptical, but curious. Sure, I had known people in college who claimed to be able to read several thousand words per minute, but I was convinced they were just skimming over the material, not really reading. Could speed-reading software substantially increase my reading speed—and would it help Howard?

All three programs begin by pointing out some common mistakes readers make, like mouthing words or moving your head from side to side while you read. Each program provides eye exercises that help improve peripheral vision and teach quick recognition of words and phrases. All three provide timed on-screen readings complete with comprehension quizzes. However, there are differences.

HANDS ON WITH EVELYN WOOD

The Evelyn Wood Dynamic Reader is based on the classic finger-on-the-page method that's become the hallmark of the stereotypical speed-reader. Like the rabbit at a dog track, the moving hand is meant to

Speed-reading software helped TAN A. SUMMERS get an A in her early medieval history class at Tulane University.

FAMILY COMPUTING

keep the eyes from stopping unnecessarily. The program has effective drills for practicing while you're away from the computer. Two eye exercises test how fast you can recognize groups of similar words or phrases and train the eyes to move quickly. Howard and I liked the colored bar charts that measured our progress.

Dynamic Reader offered a great deal of information about correct eye movement (in "S" or "Z" patterns down the page) and the overall reading process. It also included some helpful pointers on remembering what we had read. The computer exercises were merely adjuncts to the 88-page manual. Incidentally, Dynamic Reader isn't a substitute for an Evelyn Wood speed-reading course. Dan Warner, National Director of Evelyn Wood Programs, told us that the 15hour class includes much more instruction, although this software provides a good introduction to the basic Evelyn Wood method.

THE FOOTE PHILOSOPHY

Speed Reading Tutor IV differs from Dynamic Reader in both content and style. The biggest difference is that Speed Reading Tutor doesn't recommend using the hand as a pacer. The method taught in this program, designed by Georgia Institute of Technology professor Bud Foote, encourages students to develop a more individualized, flexible reading style.

Immediately apparent is the program's complete automation. Once we'd installed the program, we referred to the manual only for off-screen readings. Eight lessons and an introductory session took us through a series of challenging eye exercises, followed by paced and timed readings. We could leave a ing Tutor, Speed Reader II doesn't recom-

Could speed-reading software substantially increase my reading speed? I was skeptical.

lesson at any time and start later in exactly the same place—the MS-DOS version even recorded how long it had been between sessions and commented appropriately. Since the program can store records for up to eight people, the whole family can use it.

Speed Reading Tutor places a lot of emphasis on paced reading to build overall speed. You can use the timer and pacer utilities to clock your reading speed while practicing with your own reading material. My only complaint was that I had to figure out my own method for estimating the number of words per page. At least Dynamic Reader gave me a ruler.

IS SPEED READER II FOR YOU?

Speed Reader II is the only one of the three programs that's really appropriate for children as well as adults. No-cheat exercises require you to remember a phrase long enough to type it into the computer, which helps increase retention as well as speed. This could be frustrating, however, to nontypists and poor spellers. Like Speed Readmend hand pacing while reading. It presents a zigzag eye movement that's taught in an enjoyable exercise where text appears in different parts of the screen. Correct answers on timed reading quizzes score musical rewards—I even got the music from Raiders of the Lost Ark once.

Interesting reading material helps motivate younger readers to complete the fourto-eight-week program. In addition, Davidson offers reasonably priced data disks with reading material geared especially for children reading at the fifth-grade level and beyond. (Younger children who haven't mastered reading basics shouldn't attempt speed-reading.) Howard made little progress with the adult-oriented readings provided by all three programs but increased his reading speed by 30 percent in just two lessons once we ordered the data disk appropriate for his grade level.

Speed Reader II has an editor and instructions for creating personalized reading files, but doesn't offer off-screen readings. Nor does it provide for timed reading practice from books. It does, however, have recording forms in the back of the manual.

HOW TO CHOOSE

Deciding which of these programs to buy shouldn't be too difficult. If you're purchasing the program for children, Speed Reader II is your best choice because of the availability of child-oriented data disks. It's certainly adequate for adults as well, although the eye exercises get things off to a slow start at every practice session.

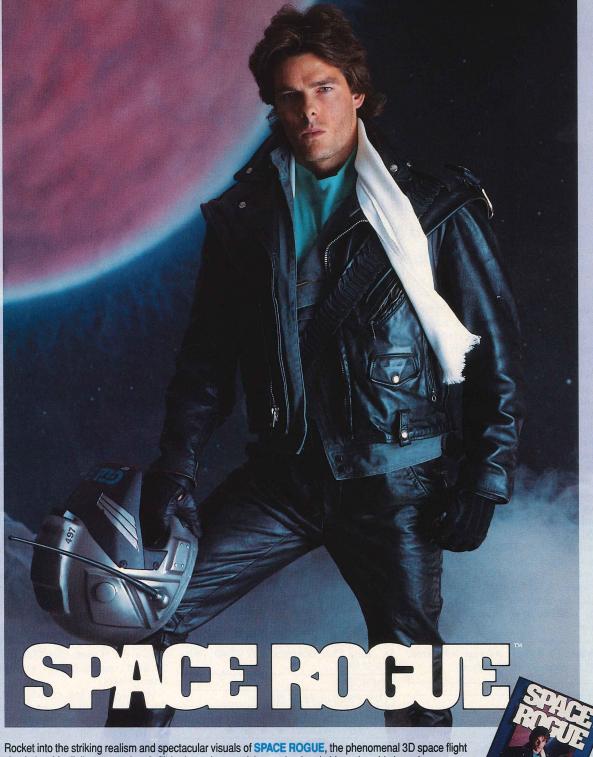
Adults deciding between Dynamic Reader and Speed Reading Tutor IV are really choosing between the hand-paced and the hands-off reading methods. Dan Warner claims that Dynamic Reader's hand-paced eye movement is "definitely faster." Bud Foote disagrees, insisting that "the problem isn't in the eye, but what's behind the eye. You're already seeing the words. You just need to get your head to accept them." After trying dozens of texts myself over a period of weeks with and without the hand, I couldn't tell any difference. My personal preference is for Speed Reading Tutor's load-and-go simplicity, which fits my lifestyle better than Dynamic Reader's more pedantic approach. Speed Reading Tutor exercises best increased my reading speed and comprehension. And, let's face it-sweeping your hand across the page while you read looks a little odd, unless the book is printed in braille.

Still skeptical about speed-reading? Not me. Using these programs has quadrupled my reading speed with no loss in comprehension, and Howard has just about doubled his speed so far. Unless you finished this article in a minute or less, you'd probably benefit from speed-reading software, too. ■

At-a-Glance Guide to Speed-Reading Software

The following chart lists program availability and price, as well as the specific features included in speed-reading packages. Each of the programs includes eye-span and recognition exercises to improve the area your eye can see and register in one glance. In addition, they teach different eye-movement exercises, which train your eyes to move down the page in an S, Z, or column pattern. Timers also keep track of your overall speed, while on-disk record-keeping tracks progress.

Product/ Price	System Requirements	No. of Lessons	Exercises	On-disk Record- keeping
Speed Reader II Davidson (213) 534-4070 \$50-\$70	48K Apple, C 64/128, 128K IBM PC, PS/2 with DOS 2.1 or higher (hard-disk drive recommended), 128K Macintosh. 5.25- and 3.5-inch disks (Apple and IBM).	6	eyespan, recognition, eye movement (Z, columns), overall speed	Macintosh version only
Speed Reading Tutor IV Simon & Schuster (212) 373-8000 \$40-\$50	64K Apple, 128K IBM PC, PS/2 with two drives; CGA, EGA, or Hercules; DOS 1.1 or higher. Planned for Macintosh.	8	eye span, recognition, overall speed	8 records
Evelyn Wood Dynamic Reader TimeWorks (312) 948-9200 \$20-\$40	128K Apple, C 64/128, 256K IBM PC, PS/2 with DOS 2.1 or higher	about 10	eye span, recognition, overall speed, eye movement (S, Z)	1 record



Rocket into the striking realism and spectacular visuals of **SPACE ROGUE**, the phenomenal 3D space flight simulation. You'll discover authentic flight dynamics, precision navigational aids and sophisticated weapons technology as you maneuver through turbulent ion storms and confront alien foes. You'll visit space stations and mining outposts — swapping tales with pirates, drinks with friends and goods with merchants. It's the seamless integration of space flight and role playing that makes **SPACE ROGUE** the first ORIGIN Cinematic ExperienceTM.









IBM/COMPATIBLE VERSION

IBM/COMPATIBLE VERSION

APPLE VERSION

Available for: IBM/Tandy/compatibles, C-64/128, Apple II series, coming soon for, Amiga and Macintosh; actual screens may vary.

Can't find SPACE ROGUE at your local retailer? Call 1-800-999-4939 (8am to 5pm EST) for Visa/MC orders; or mail check or money order (U.S.\$) to ORIGIN.

All versions \$49.95; shipping is FREE via UPS. Allow 1-2 weeks for delivery. ORIGIN, P.O. Box 161750, Austin, Texas 78716.

Software for Learning and Leisure

Comprehensive and Capsule Reviews of New and Noteworthy Programs for Education, Family Productivity, and Entertainment

The following ratings key and table refer to full as well as capsule software reviews. Listed are various types of computers, as designated under "System Requirements," and the models included under each designation. When a review lists additional hardware, software, or memory, it is required unless noted as "recommended" or "optional." When a review lists more than one computer, the machine marked with an asterisk (*) is the one on which the software was reviewed. Requirements are not listed where obvious (for instance, printers with graphics programs). Operating system requirements, such as MS-DOS or the Macintosh System file, are listed only when they're not the standard, minimum requirement (DOS 2.0 for IBM PC or compatibles, System 3.2 for the Macintosh, or ProDOS for the Apple II). For those computer systems that can use both 5.25- and 3.5-inch disks (IBM PC and PS/2 or the Apple II), we've listed only those disk sizes that are either supplied with the software or available at no extra cost from the publisher.

Ratings Key: O Poor; * Average; ** Good; *** Very good; *** Excellent.

Designation	Models
512K Amiga	500, 1000, 2000
48K Apple	II/II Plus/IIe/IIc/IIgs (in IIe/c mode)
64K Apple	II Plus/IIe/IIc/IIGs (in IIe/c mode)
128K Apple	IIe/IIc/IIgs (in'IIe/c mode)
128Ke Apple	IIe (enhanced ROM)/IIc/IIGs (in IIe/c mode)
Apple IIGS	IIGs only
48K Atari	800/600XL/800XL/65XE/130XE
512K Atari ST	520ST/1040ST/Mega ST
C 64	C 64, C 128 (in C 64 mode)
IBM PC	PC/XT/AT, PS/2 and compatibles
128K Macintosh	128K/512K/512Ke/Plus/SE/II
512K Macintosh	512K/512Ke/Plus/SE/II
512Ke Macintosh	512Ke/Plus/SE/II
1MB Macintosh	Plus/SE/II



Tracking unpleasant symptoms is part of the WellAware: Food Sensitivity method of allergy detection.

FAMILY PRODUCTIVITY

WellAware: Food Sensitivity

SYSTEM REQUIREMENTS: 512K IBM PC, PS/2. Two disk drives or hard-disk drive. 5.25- or 3.5-inch disks. Printer recommended

PUBLISHER: Positech, 484B Washington St., Suite 350, Monterey, CA 93940; (408) 373-5739

PRICE: \$99

COPY PROTECTED: No

OVERALL RATING: * * *

DOCUMENTATION: * * *

ERROR HANDLING: * * *

GRAPHICS QUALITY: N/A

EASE OF USE: * * *

More than 34 million people in the United States have food allergies. Symptoms include headaches, asthma, sinus congestion, and more, but many of these people don't fully understand their condition. Scratch tests by an allergist can be expensive, time consuming, and inconclusive. And, due to the variety and frequency of the average person's food intake, a causal connection between a specific food and a health condition is, at best, a record-keeping nightmare.

WellAware: Food Sensitivity is designed to simplify the detective work.

Proposed and developed by a physician, WellAware is a food and symptom diary that draws connections between foods eaten and worsening symptoms. Although best used in conjunction with a health-care professional's input, WellAware allows parents to take an active role in determining and solving family health problems.

Help buttons, ticker-tape instructions, and a foolproof interface make *WellAware* one of the most user-friendly programs this side of a Macintosh environment. The user's guide is forbiddingly thick but easy to read and includes comprehensive extras such as a physician's guide, food- and symptom- report forms for teachers and babysitters, and a picture guide of different facial expressions to help a child describe symptom severity.

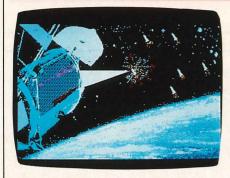
To keep track of food intake, users create a card listing the foods eaten (either selected from the database of 3,000 name-brand food and fast-food entries or entered ingredient by ingredient) and the time and date of ingestion. Users also choose symptoms from a list of more than 200 or enter them by hand, and rate them according to the severity level.

With regular and conscientious use, an extensive card file is created and can be analyzed. After a recommended minimum of 10 recorded allergic occurrences, WellAware analyzes its database of cards for any and all correlations between foods eaten and symptoms. The result is a bar graph showing the ingredients with the greatest statistically positive correlation to the symptom. Your doctor can then review a printout of the report.

It would be great if a simple blood test could pinpoint food allergies, but until such a method is perfected, determining one's sensitivity to food will be a time-consuming process of self-monitoring and record keeping. WellAware makes this task as painless and as well organized as possible.

-ROBERT M. GILPIN

FAMILY COMPUTING



Consult satellite photos to find the guilty party.

ENTERTAINMENT

Presumed Guilty!

SYSTEM REQUIREMENTS: C 64, 256K IBM PC*; CGA, EGA; 5.25- and 3.5-inch disks (IBM)

PUBLISHER: Cosmi Corp.; 431 N. Figueroa St., Wilmington, CA 90744; (213) 835-9687

PRICE: \$30

COPY PROTECTED: No

OVERALL PERFORMANCE: ★ ★ ★

DOCUMENTATION: ★ ★

PLAY SYSTEM: ★ ★ ★

GRAPHICS QUALITY: ★ ★ ★

EASE OF USE: ★ ★

Cosmi bills *Presumed Guilty!* as "The Espionage Crime of the Century," and this means that you detective and mystery buffs should get out your dark sunglasses and trench coats for hours of intrigue.

The setting is the not-too-distant future. You are a new agent working for COPNET (Computer Operated Police NETwork), an agency designed to "end . . . unpunished criminal acts" in the free world. It's your first day, and your first assignment involves an important Strategic Defense Initiative (S.D.I.) researcher who is killed in a car accident under "suspicious circumstances." Suddenly, you are one of the prime suspects. You're being framed by an enemy of COPNET who can somehow tap into your computer system, and you must prove your innocence to save your skin and COPNET.

Your time is spent at your computer workstation, where you are tied into COP-NET's worldwide computer network, which has access to many different types of information gained from investigations, interrogations, and other police files. If information is unavailable, COPNET sends out intelligence officers to investigate, provided the info will be pertinent to your case.

When you ask the COPNET system about something relevant, the computer gives you updates, including dossiers, scanned-image photos, and DNA samples that can be analyzed for genetic "fingerprints." Dossiers contain plenty of both useful and superflu-

ous information—just what you'd expect in a real investigation. You can also ask your COPNET advisor for help.

Presumed Guilty! comes with a manual, an 'Interactive Audio 'Clue' Cassette,' and a case workbook. The manual details installation, Cosmi background, and data collection and analysis. The cassette contains everything from news reports to classified surveillance conversations, complete with sappy intrigue music and cheesy foreign spy accents. The workbook is a tremendously useful tool for organizing the many names, organizations, events, and news reports chronologically; I tried to play the game without the workbook and found the amount of data overwhelming.

I had only a couple of problems with this game: First, there's no way to turn the sound off from within the game (and the game is not quiet); secondly, the hard-disk installation batch file for IBM and compatible machines doesn't work quite right, nor does the restore-old-game batch file-you have to read the files and interpret them (they do make sense, but not to DOS). [Editor's note: This problem has been corrected in the latest release of the game.] Also, sometimes the screen display is erratic. However, because of the scope and detail of Presumed Guilty!, I can overlook these minor flaws. I've spent hours with the game and am still intrigued (read stumped). The toll-free tech support is helpful.

Proving your innocence within a sea of your own ignorance can really be disconcerting. The closer you get to figuring out whodunit, the closer you get to being taken off of the case and slammed behind bars. Given all of its features, the low list price, and the high-interest plot, *Presumed Guilty!* is a great value.

—DAN FARKAS

Might and Magic II

SYSTEM REQUIREMENTS: 512K Amiga (in August), 128Ke Apple*, C 64, 256K IBM PC (EGA, DOS 2.1 or higher, 5.25-inch disks. 3.5-inch disks \$5 extra), 512K Macintosh

PUBLISHER: New World Computing, 14922 Calvert St., Van Nuys, CA 91411; (818) 785-0401

PRICE: \$40-\$60

COPY PROTECTED: Yes

OVERALL PERFORMANCE: ★ ★

DOCUMENTATION: ★ ★ ★

PLAY SYSTEM: * * *

GRAPHICS QUALITY: ★ ★ ★

EASE OF USE: ★ ★ ★

With the large number of computer roleplaying games now on the market, it's become increasingly difficult for any one of



New characters, creatures, and perils await you in this eagerly received sequel.

them to stand out. Story lines and objectives are strikingly similar, and play systems have not fared much better.

Might and Magic II's story line is nothing new: travel through time, save the world, and so on. The play system, however, is admirable. New ideas abound, and, while some elements have been borrowed from other games, they have been improved.

The hallmark of Might and Magic II is its ease of use. Despite the vastness of its scope (the wilderness, towns, dungeons, castles, elemental planes, and different time periods), only features that aid playability or add challenge have been included. Spells, for example, require only one component in varying quantities. And, rather than waste time healing badly wounded characters (which often takes many real-time minutes in other games), you can simply rejuvenate characters by resting them—as long as their food holds out. The overall quest is divided into a variety of interesting subadventures that, when completed, usually lead to new possibilities.

Your party consists of up to eight characters drawn from eight classes. These adventurers can either be created or imported from *Might and Magic I*. At least two of the party must be hired from the people that you encounter and paid according to their abilities. There is also an arsenal of weapons and equipment to choose from in order to combat the plethora of monsters that turn up.

Play is carried out from the characters' points of view (3-D forward perspective) throughout. Considering the large area of the game world, this interface would normally make mapping tedious; fortunately, there is an innovative auto-mapping feature included, which permanently records where you've been.

Might and Magic II is an exceptionally well-designed and playable game. It may not be as flashy as other games, but its efficient use of features keeps it from getting bogged down in extraneous details. Everything included is of the highest quality, and although this may be the 1,000th time you've tried to save the world, it won't be boring.

—DAVID LANGENDOEN

FAMILY COMPUTING CAPSULE REVIEWS

TITLE/PUBLISHER PRICE	SUMMARY	SYSTEM REQUIREMENTS	CP		TINO		GQ	EU
Mount Murdoch: Large Character Adventure System Kidsview Software, Inc. P.O. Box 98 Warner, NH 03278 (603) 927-4428 (540-\$50	Menu-driven activities for ages 12 to adult include an all-text adventure with treasures and unexpected events and an adventure game construction tool for designing original games. Large-size characters (four times the regular size) make it accessible to the visually impaired. —Carol S. Holzberg	128Ke Apple*, C 64, 256K IBM PC, PS/2. CGA. 5.25-inch disks (Apple and IBM).	N	* *	* *	*	N/A	*
The Election of 1912 Eastgate Systems, Inc. P.O. Box 1307 Cambridge, MA 02238 617) 924-9044 445	As Teddy Roosevelt's campaign manager, players age 10 to adult follow a Hypertext simulation full of facts, issues, people, and events in an effort to defeat incumbent William Howard Taft and New Jersey Governor Woodrow Wilson. An educational journey in history. —Gwen Solomon	512Ke Macintosh.	N	* * *	*	* * *	* * *	* * *
Toyon Patrol MECC 490 Lexington Ave. N. St. Paul, MN 55126 612) 481-3500 59	Players age 11 to 17 will have fun patrolling the South Pacific in search of Zoyons, an endangered species of cute but mischievous animals. To return the creatures to their native habitat, players must practice database management, map reading, and problem solving. May the "lempels" be with you. —Carol S. Holzberg	128K Apple. Color monitor recommended. 5.25- or 3.5-inch disks.	Y	* * *	* * *	* * *	* *	*
NTERTAINMENT	semilarios om articipal de son militarios sun militarios sun a		171/19				4.17	
TITLE/PUBLISHER PRICE	SUMMARY	SYSTEM REQUIREMENTS	СР		TIN		GQ	EU
Paladin Omnitrend Software P.O. Box 733 West Simsbury, CT 06092 203) 658-6917	Omnitrend's attempt at an <i>Ultima</i> -type game features effective graphics, humorous sounds, and Quest Builder—a game editor that lets you design your own adventures. Game play, however, is often slow and the user interface can be irritating. I found this to be rather typical adventurer's fare. —Damian Roskill	512K Amiga, 512K Atari ST, 512K IBM PC, 512Ke Mac* CGA, EGA (IBM).	Y	*	* *	*	* *	*
Gearch for the Titanic Capstone 4160 SW 139th Ct. Miami, FL 33186 305) 252-9040 330-\$40.	Dive into a simulation of undersea exploration as you join the hunt for the Titanic. Starting as an inexperienced oceanographer, you search for small wrecks, and work up to the Titanic. Detailed graphics and complex equipment add a lot to the game, but a healthy dose of patience is needed to enjoy this one. —Steve Williams	128K Apple, C 64, 256K IBM PC.* CGA, EGA, VGA (IBM). 80-col. card (Apple).	N	* *	*	* *	* * *	* *
Pr. Doom's Revenge Paragon Software 500 Rugh St. Greensburg, PA 15601 412) 838-1166 630-\$45 Amiga price not available at press time.	Acting as both Captain America and Spiderman, you must save the world from Dr. Doom's nefarious schemes. Play is centered around an on-screen comic strip, whose panels are acted out by the player in arcade-style action. The story is entertaining, the graphics are good, and the manual is detailed. However, the action scenes wear thin and aren't as colorful as real comics. —David Langendoen	512K Amiga, C 64, 512K IBM PC.* CGA, EGA (IBM). Joystick (C 64).	Y	* *	* * *	* *	* *	* * *
Hostage Mindscape 3444 Dundee Rd. Northbrook, IL 60062 (312) 480-7667 §30—\$45.	Terrorists have taken over the embassy and are holding hostages. It's up to you to direct your six assault-team members as they infiltrate the embassy, neutralize the terrorists, and free the hostages. The game is fun, challenging, and looks great. Even though the scenario is always the same, you'll play several times. —Steve Williams	512K Apple IIGS, 512K Amiga, 512K Atari ST, C 64, 512K IBM PC,* 1MB Mac. CGA, EGA (IBM). Joystick (Amiga, ST).	Y	* * *	* * *	* * *	* * * *	*
Furbo Champions Mastertronic International, Inc. 711 W. 17th St. Unit 6-9 Costa Mesa, CA 92627 (714) 631-1001 §10—\$13.	Turbo Champions never leaves the starting line. While many great games have been designed with the object of driving a car around a ready-made or custom track, TC isn't one of them. The track designer is simple to use, but lacks pizzazz. The documentation is nearly nonexistent—then again, there isn't much to talk about. —David Langendoen	256K IBM PC. CGA, EGA.	Y	*	0	*	*	* * *

Entertainment News

The Latest Scoop on Games

BY RICHARD G. SHEFFIELD



KEEP ON TREKKIN'. Star Trek fans, myself included, will be thrilled to see two new games "beam down" later this year. Game designer Ron Martinez and his

crew will follow earlier Star Trek games with Star Trek: Hostage to Reason (\$50; 512K Mac, 256K IBM), featuring Captain Kirk and the original crew members, and The Next Generation: The Transinium Challenge (\$50; 512K Mac, 256K IBM), with Captain Jean-Luc Picard and the new officers and crew. Both games, which will be published and distributed by Simon & Schuster Software, offer dazzling graphics in the form of digitized shots from the television shows. I hear that the characters are better developed and the game play is more



Warp into adventure with the gang in this Trekkie treat.

interactive than in previous releases. (Rumor also has it that Ron and company are working on two more Star Trek games that will be available soon after.)

FIENDISH FUN. Fiendish Freddy's Big Top o' Fun (\$45; 512K IBM, 512K Amiga, 512K Atari ST), is an action-packed circus simulation. Presented in cartoon-style graphics, the game has you participate in a number of circus acts (such as juggling, knife throwing, and a cannon shot) while trying to avoid an evil clown who is trying

RICHARD G. SHEFFIELD is a freelance writer based in Atlanta, Georgia, and has written several books on computer games.



Unless you're sharp, clowning around with knives can get you into a sticky situation in Freddy's big top.

to embarrass you in front of the crowd. Written by Chris Gray (of *Infiltrator* fame), this game should be a barrel of fun for the entire family.

A MATTER OF TIME. Mindscape's Guns and Butter (no price available at press time; Mac, IBM) is a simulation of conquest and economics by Chris Crawford, who developed the classic Balance of Power. As the game moves through the centuries, you must carefully allocate your changing resources (for example, tomahawks to computers) as you try to hire, feed, clothe, and arm an army large enough to successfully conquer neighboring lands.

RIDE ON THE WILD SIDE. Slip on your driving gloves, you're going to do a lot of riding in Harley-Davidson: The Road to Sturgis (\$50; 512K IBM). In this graphic adventure, also from Mindscape, you become part of a rowdy motorcycle gang roaring down the roads out west as you try to get to a biker convention in Sturgis, South Dakota. You'll find arcade-style races along the way—are you tough enough to win?

good News For DUNGEON DELVERS. Strategic Simulations, Inc., better known as S.S.I., plans two more visits into the Forgotten Realm of Advanced Dungeons and Dragons, to be released soon. *Hillsfar* (C 64, 384K IBM; \$40–\$50) is next in the series after the currently available *Pool of Radiance*. Shortly after arriving in Hillsfar, each of your characters will be sent on a

series of quests. They must compete in deadly action events such as archery and arena combat, and the winners walk away with valuable rewards. Guard these rewards carefully as you may need to transfer them and your characters into the next AD&D game, Curse of the Azure Bonds (C 64, Apple II, 512K IBM; \$40 – \$50). This game covers the most detailed and populous areas of the Forgotten Realms. Your characters must search for the source of the five magical bonds that control them. Quests for treasure, power, and magic all pale in significance when the ultimate prize is freedom.

NEAR-FUTURE CONFLICTS. United States and Soviet conflicts in the near future are simulated in two other S.S.I. releases. Overrun! (C 64, 64K Apple II, IBM; \$50) is an advanced-level study of modern land warfare. It features an improved version of the gaming system made popular in Panzer Strike! and Typhoon of Steel. The new system will keep track of every piece of equipment, down to an infantryman's last round of ammo. All of the latest advances in hightech warfare are included, even the new Soviet T-94 tank with reactive armor. You can play any of the eight preset scenarios (including the Arab-Israeli conflict of 1979) or create your own.

LIGHTNING STRIKES. Red Lightning (512K IBM, 512K Atari ST; \$60) also depicts the next war between the United States and the Warsaw Pact nations. This game includes



Searching for the five Azure Bonds is no picnic; in fact, you might end up as someone's lunch.

Upcoming Features In

Home Office COMPUTING

SEPTEMBER 1989

Special Anniversary Issue

101 Home Businesses

Expert Business Advice

Home-Office Survey Results

OCTOBER 1989

A Financial Self-Test

Guide to Mail-Order Computers

Incorporation vs.
Partnership

FAMILY COMPUTING

the war in the air as well as ground action. The intermediate-to-advanced level of play keeps up with every single piece of equipment and armor. Here you can pit the U.S. F-117 Stealth Fighter against the Soviet MiG-31 for the ultimate in high-tech air combat while main battle tanks and armored personnel carriers fight it out below. Variable reality levels let you adjust the game play to match your skills.

RUMORS FROM THE STREET. Several game companies have disclosed that they are including virus protection as well as copy protection in new releases. Although they are confident that the new code can foil any attempt to reengineer the code, they prefer to remain anonymous. They fear that going public with such an announcement would be seen as a challenge by code-breaking hackers.

SHAME, SHAME. Speaking of hackers, don't look for copy-protection schemes to ease in the near future. In a study by one manufacturer, serious gamers averaged about 10 new titles a year while stating that they spend only about \$120 a year on games. With the average price of entertainment software around \$30, the numbers just don't add up. Apparently, unauthorized copying is still alive and well.

GAME HINTS

Neuromancer (Interplay Productions). Science fiction role-playing set in the 21st century.



- ★ Acid, Injector, Thunderhead, and Python can be used only once, so stock up.
- ★ Don't sell body parts. The money is not worth it.
- ★ The Hitachi Biotech experiment involves the removal of a needed body part.
- ★ Buy the best cyberspace-compatible deck as soon as possible.
- ★ Cheap Hotel has some interesting food on its menu.
- ★ When buying a deck from Asano, remember that he hates Edo.
- ★ Wondering what is behind the secretary

in Bank of Berne? Try getting an account.

- ★ Want to get rid of Larry Moe? Arrest him.
- ★ ArmorAll restocks your cyberdeck shielding.
- ★ Finn has some software to get you on your way.

BENJAMIN SHAPIRO London, Ontario Canada

Times of Lore (Origin Systems). Find the king's murderer in this arcade adventure.



- ★ Save your game often by sleeping at the inn.
- ★ Use the potions and scrolls you find wisely; some are rare.
- ★ Accept the offer you get in Eralan to regain the foretelling stones.
- ★ Look for the magical axe in Lankwell.
- ★ Write down all hints and requests you receive. Following them exactly is vital to your survival.
- ★ Sleeping at an inn will restore your strength.
- ★ Of all the monsters you encounter, the ghost is mightiest.
- ★ Killing the giant in the Northeast will be worth your while.
- ★ The blue potion will heal you considerably.
- ★ Talk to all innkeepers at length, for they may know something you don't.

MARC COMPTION Goleta, California

SEND US YOUR HINTS—AND WIN A FREE GAME!

Don't miss the opportunity to share your original game hints and tips with other readers. Submit entries to Entertainment Editor, HOME-OFFICE COMPUTING, 730 Broadway, New York, NY 10003. Include your name, address, telephone number, a short description of the game, and the brand and model of the computer you own. If your tips are selected for publication, we'll award you a new game for your computer. We reserve the right to edit submissions for accuracy, clarity, and length. Unfortunately, we cannot acknowledge each submission.

IBM Software as low as \$249

VISA

Thousands of IBM/Compatible Public Domain and Shareware Programs
Are Available from the Micro Star Library and at Incredibly Low Prices!
We feature the best and most up-to-date shareware available.
Our software is guaranteed against bugs, defects, viruses, etc.



FUNNELS AND BUCKETS (201)

MATHPAK (202) Tutorial with

lessons in higher math.

PC-TOUCH (204) Learn typina.

BASIC TUTORIAL (208) Learn

programming with BASIC.
BEGINNING SPANISH (211)

BIBLEQ (214) Learn the Bible with this Q-A tutorial.

FACTS 50 (239) Geography

lessons for U.S. Nice graphics.

SPREADSHEET TEMPLATES

LOTUS MACROS (601) Save

hours of work. (Req. Lotus)
LOTUS SPREADSHEET TEM-

PLATES (602) Ready-made.

(Requires Lotus 1-2-3)
GOAL-SEEKER V3.5 (624)

Achieve objectives by chang-

ing spreadsheet and seeing

result. (Requires Lotus). LOTUS TUTORIAL (630) Learn

APPLICATIONS

FORM LETTERS (1907) Com-

monly used form letters and

business applications. E-Z FORMS (1908) Make forms

to meet different needs.

Lotus (requires Lotus).

SPANISH II (232) Sequel

Tutorial

A fun way to learn math

And We Offer FREE Technical Support For Our Customers

ORDER TODAY on our TOLL FREE PHONE LINES • ORDERS SHIPPED OUT SAME OR NEXT DAY

GAMES

ARCADE GAMES (106) Has Kong, 3-D Pacman, Bricks, Pango. (Requires color.)
BASIC GAMES (107) Pacman, Lunar Lander, Startrek, Meteor, Breakout, and others. CARD GAMES (109) Canasta, hearts, draw poker & bridge. STRIKER (110) Defender-like game. "Top Gun" in space. FLIGHTMARE (112) Futuristic fighter pilot game. (Requires color graphics adapter.)
SLEUTH (117) Who done if?
DND (119) Like Dungeons

ROUND 42 (120) Better than Space Invaders. 42 levels. GAMES IN BASIC (124) Lander, biorhythms, desert, Phoenix, Star Wars, others. QUEST (152) Role playing

QUEST (152) Role playing adventure fantasy game. (Requires CGA.)

SPACE WAR (158) Dogfight in outer space, using phasers, photon torpedoes, etc. BRIDGE PAL (171) Complete

game of contract bridge, with tutorial.

FENIX (193) Just like the

famous arcade game.

PINBALL GAMES (197) Pinball, Rain, Twilight Zone,
Wizard, etc.

KID-GAMES (GAM8) Animals math, clock game, alphabet. etc.

CHESS (GAM9) Incredible. 2D and 3D. Many levels. Play back moves, store games.



EGA RISK (GAM11) World domination in great color. Includes EGA Asteroids.

PC PRO-GOLF (GAM27-28)
Great graphics. Complete
18 hole, 72 par course. (CGA)
PEARL HARBOR (GAM32)
Shoot down Jap Zeros before
they destroy U.S. Fleet. (CGA)
ULTIMA 21 DELUXE (GAM34)
Best Blackjack game around.
Includes Video Poker.

FORD SIMULATOR (GAM37) Great driving simulation. (Requires CGA).



MUSIC

PIANOMAN 4.0 (301) Turn your keyboard into a piano. PC-MUSICIAN (302) Compose, save, and play music.

WORD PROCESSING

PC-Write 3.0 (434, 435, 436) (3 disks) Newest version! Very popular and complete. Includes spelling checker. PC-TYPE+ (421-423) (3 disks) Excellent. Includes mail merge, 100,000 word spelling checker. Interfaces with PC-File+, PC-Style.

merge, 100,000 word speliing checker. Interfaces with PC-File+, PC-Style. MAXI-MAX (432) 59 macros to use with Word Perfect 4.2 or later. 11 templates for forms, border designs, etc.

GRAPHICS

KEYDRAW CAD SYSTEM (1001, 1002, 1065, 1066) (4 disks) Popular. Also uses mouse. (Requires color graphics).



OR MODE SC1 PG00 10 1 11

SIDEWAYS (1007) Prints text sideways. Useful for Lotus. SIMCGA/HGCIBM (1027, 1062) (2 disks) Use with Hercules graphics card/compatible to run programs requiring CGA on your mono-

IMAGE 3-D (1048) Create and edit 3-D objects. Move, scale, rotate and tip image. FINGERPAINT (1050) Use keyboard or mouse to draw. Like MacPaint. (Requires CGA or EGA)

CGA or EGA).

DANCAD 3-D (1051, 1052) (2 disks) Create 3-D graphics. Rotate, magnify, etc. Runs on CGA, EGA, or Hercules. FANTASY (1057) Create flowing graphic images with mouse or keyboard. (CGA). FLOWCHARTING (1078-1079) Complete system for flow charts, organizational, electrical, etc., with symbols.

SPREADSHEETS

AS-EASY-AS (505) Great. Includes screen help menus. Utilizes function keys. A Lotus clone that reads Lotus files. PC-CALC+ (512-514) (3 disks) Jim Button's famous Lotus clone.

BASIC

PC-PROFESSOR (1401) BASIC tutorial. Good.
BASIC PROGRAM GENERA-TOR (1402) The menu driven way to write programs.
B-WINDOW (1407) Give windowing capabilities to your Basic program.

UTILITIES

HOMEBASE (2608, 2612, 2613) (3 disks) Complete desktop organizer. Great. PROFESSIONAL MASTERKEY (2805) Like Norton's. Retrieve

deleted files. A lifesaver.

BAKER'S DOZEN (2821) 13 utilities from Buthonware.
AUTOMENU (3003) Make PC menu driven. Incl. passwords. SCREEN (3006) Save your monitor from screen burn-in. DOT MATRIX FONTS (3061-3062) (2 disks) Print your test in different fonts.

ACCOUNTING/FINANCE

MARKET CGA (BUS17) Performs sophisticated analysis on stocks, funds, etc. (EGA version is BUS16).

BILLPOWER+ (BUS 40, 41) (2 disks) Bill clients for time and materials, advances, retainers, etc. Computes, taxes, past due interest, etc. Has full G/L.

CPA LEDGER (706-708) (3 disks) Complete general ledger for corporations, partnerships or sole proprietors. PERSONAL FINANCE MANAGER (715) Household budget manager. Track checking, savings, investments. PAYROLL USA (725-726) Up to

2,000 employees in any state.
dBaselll and Lotus compatible. Complete P/R system.
EXPRESS CHECK (786) Check account with running balance, monthly reports, etc.
Prints checks.

FINANCE MANAGER II (774-775) (2 disks) For personal or small business financial management.

DOS

DOS TUTORIAL (1301) Teaches you to use DOS. STILL RIVER SHELL (1304) RUN DOS commands from a menu. Makes DOS easy. BATCH FILE TUTORIAL (1305) Utilize batch file processing. MORE DOS TIPS (1318, 1323) (2 disks) More about DOS. HELP DOS (1326) On line DOS help with menus. Includes DOS dictionary of

terms and a hints menu. RELIGION

THE BIBLE (3301-3306) (6 disks) Old Testament, King James version.

THE BIBLE (3307-3308) (2 disks) New Testament, King James version.

WORD WORKER (3309-3310) (2 disks) Bible search program. New Testament, King James version.

BIBLEMEN (3330) Excellent Bible quiz program.

EDUCATION

AMY'S FIRST PRIMER (248) Child's learning game teaches letters, numbers, keyboard.



AMY'S FIRST PRIMER

INCREDIBLY LOW PRICES

1-9 Disks \$2°° ea. 10-19 Disks \$2°° ea. 20 or more \$24° ea.

MANAGER'S PLANNER (1920)
Daily planner. Prints out.
HOME INVENTORY (1966)
Track all your possessions.
BIORHYTHM (1990) Display
the 3 biological cycles; physical, emotional, intellectual.
FAMILY HISTORY (2203-2204)
(2 disks) Create files and
genealogical reports.
LOTIO PROPHET (2364) Best
Lotto program we've seen.
CITY DESK (2513) Simple
desktop publisher.

TELECOMMUNICATIONS

Q—MODEM 3.1 (1101, 1102, 1144) (3 disks) Powerful but easy to use. Fast. RBBS V16.1A (1107-1109, 1150) (4 disks) Multi-user bulletin board system. PROCOM 2.43 (1156) Outstanding modem software.

SECURITY/HACKING

COPY PROTECTION I (1219) Instructions for unprotecting commercial software. COPY PROTECTION II (1220) More software unprotect. COPY PROTECTION III (1221) More software to unprotect. FLUSHOT (1225) Checks software for viruses.

DATABASE PROGRAMS

PC-FILE dB (853, 854, 855) (3 disks) Newest version! Rated better than dBase III+. FILE EXPRESS 4.0 (803-804) Powerful system. Allows 32,000 records. Sorts to 10 fields. DBASE III+ ROUTINES (851-852) (2 disks) Latest utilities to help you utilize dBase III+.

MICRO STAR

PLEASE PRINT		DER FORI	M	de la companya de la
NAME				
ADDRESS		THE PERMIT	To the last	
CITY	na selvani i	STATE	ZIP	
PHONE ()		The same	
NUMBER OF D \$2.99 PER DIS \$2.49 FOR 20 O SOFTWARE ON	K FOR 1-9; R MORE; N	\$2.69 FOR 1 NOTE: 2 DISK	0-19; SETS ARE 2	
C	ALIF. RES	IDENTS ADD	7% TAX = _	
	SHIPE	PING AND HA	ANDLING =	\$3.50
(FOREIGN	ORDERS	ADD \$5/CAN	NADA \$2) = _	
	AR • 1105 S	R TO: SECOND ST. • I OR MASTERCA	ENCINITAS CA	92024
NUMBER:	AND THE PERSON	NAME OF THE PARTY OF		
EXP. DATE:	COD orders	(add \$4.00). Ca	all or write for f	

CALL TODAY FOR FREE CATALOG

800-444-1343

From 7 AM to 5 PM PST Monday - Saturday FOREIGN: (619) 436-0130

HOME OFFICE SHOPPER

If You Are Looking For Ideas To Start A Business, Need Products Or Want Business Services. Read The HOME OFFICE SHOPPER Every Month!

ACCESSORIES

---------The Print Position Aid is The Answer!

ESPECIALLY FOR ANYONE WANTING TO FILL OUT PRE-PRINTED OR PRE-DEFINED FORMS OR LAYOUTS

With the PPA anyone working on new tax forms • pre-printed health forms • pre-defined business forms • even layouts of their own design can locate line and column print positions quickly and easily.

FOR QUICK AND ACCURATE RESULTS ALL YOU DO IS JUST PLACE THE PROPER GRID OVER-LAY OVER THE FORM OR LAYOUT YOU ARE WORKING ON. THEN TO FILL IN YOUR FORM SIMPLY MOVE YOUR CURSOR TO THE LINE AND COLUMN PRINTING SPACES SHOWN BY THE GRID LOCATIONS ON THE PPA OVERLAY, THE TEMPLATES ON THIS AID ARE ARRANGED SO THAT YOU WORK AGAINST A SOFT YELLOW "EASY ON THE EYES" BACKGROUND.



This easy to use Aid consists of 6 transparent 11 x 15 inch grid overlays accommodating printing needs of 10-12-15 characters per hoirzontal inch and 6 or 8 lines per vertical inch. These overlays provide PICA and MATRIX printing space bars for 5-6-8.8-17.7-17.1 and 20 C.P.I.

This positioning Aid is useful because when working with Computers – sooner or later line & column printing locations have to be determined ... for example.

 After any design or modifying work has been done on a business form or report layout, the PPA is helpful in conducting a "quick check" on the accuracy of any paste up form composition - or print spacing.

Next, after a form/layout has been printed, the Aid is help-

ful in "proofing" the copy so that any necessary copy cor-rections can be made.

Most importantly – with the PPA you "control your own Printing Destiny."

THERE IS NO NEED to obtain and rely on special programs for

your pre-printed form printing updates—
THERE IS NO NEED to go through the extra time and work to get the "correct grids" from your computer to over print on the pre-defined forms you're working on to help in finding the proper line and column print positions-

With the PPA the grid spacing is always there for you to use - all you do is read the answers from the grid readings and set your cursor directly to your form filling print locations.

One person covered the subject very well by simply saying. "the Print Position Aid is a very useful tool for me to have because it helps me in my work."

The PPA, which can be used with any printer is priced at \$49.95 plus \$3.90 shipping and handling. To order just call - TOLL FREE 1-800-544-0837 In RI (call collect) 617-444-3833 Computing Aids, Inc., PO Box 227, Needham, MA 02192

CIRCLE READER SERVICE 1

Beginning now, HOME OFFICE COMPUTING offers Beginning now. HOME OFFICE COMPUTING offers you 2 classified sections to help you target your specific group of buyers. The HOME OFFICE SHOPPER section targets buyers who purchase Home Office products for specific business use. The general CLASSIFED section targets other buyers in the home. When you place your ad be sure to specify both the section and the category within the section that you want your edit to approximate the section. that you want your ad to appear.

The HOME OFFICE SHOPPER Categories:

ACCESSORIES
BOOKS/MANUALS/PUBLICATIONS BULK DISKS FOR SALE
BUSINESS OPPORTUNITIES
BUSINESS SERVICES COMPUTER PAPER COMPLITER REPAIR DATA TRANSFER FAX MACHINES FURNITURE HARDWARE INSURANCE MISCELLANEOUS MODEMS PAPER PHONE ACCESSORIES **BUSINESS SOFTWARE** TONER CARTRIDGES

The General CLASSIFIED Categories: ACCESSORIES
BOOKS/MANUALS/PUBLICATIONS CONSUMERS GOODS HARDWARE MISCELLANEOUS PUBLIC DOMAIN & SHAREWARE SOFTWARE USERS' GROUPS

NEW LINE RATES:

VIDEO GAMES

(Effective July 1989 issue) Prepayment Required

Net cost per line per issue:	
1x:	.\$29.00
3x consecutive:	27.00
6x consecutive:	26.00
12x consecutive:	25.00
\$25 extra per issue for any/all bold print.	
Add 25% extra for gray tint.	
3-line minimum	

To determine number of lines, count 40 characters per line including spaces and punctuation. If you use all caps or bold print, count 36 characters per line. A partial line counts as a whole line.

NEW DISPLAY RATES:

Available Upon Request

NEW DISPLAY RATES:

(Effective July 1989 issue) Prepayment Required

Net cost per column inch per month: 1x: \$315.00 3x consecutive: 290.00 12x consecutive: Add \$50 for Reader Service number for all display ads under 3 column inches. Column width is 2 3/16".

Figure 10 lines maximum per column inch. Using fewer than 10 lines allows for larger typesizes or graphics. To determine the number of lines, use the same formula as for line ads but subtract 2 characters per line to leave space for a border on all sides. Typesetting is available at no extra charge.

When submitting a camera-ready ad, please indicate if the ad was printed on a laser printer.

All advertisers must submit phone numbers for our records even if the number is not to appear in the ad. All ads with PO Boxes must submit street address for our records.

TO PLACE YOUR AD:

Print or type your copy

Determine the section and the category

Decide the number of consecutive insertions and calculate amount due

Include Check/MO/VI/MC and send to:

HOME OFFICE COMPUTING 730 BROADWAY NEW YORK, NY 10003 ATTENTION: GREG RAPPORT

Or call 212-979-0728 and we will help you plan a cost-effective strategy that benefits you!

October	5/89
November	1/89
December	5/89

HOME OFFICE COMPUTING cannot be responsible for the accuracy of description, but will attempt to screen out misleading ads, and reserves the right to reject, edit or cancel any advertisement at any time.
Publisher is not liable for ads that are not published.

ACCESSORIES

DISKETTES MAILERS. All sizes. Free sample. Free shipping. SIRGO, Box 178, Dyer, IN 46311

EXECUFOLDTM **Desktop Folder**



Simply drop in a letter, 1-3 sheets stapled or unstapled for a perfect fold everytime.

List \$279.00 - 30 Day Money Back Guarantee

Machines for Business 20505 EAST VALLEY BLVD., WALNUT, CA 91789

Call: 800-255-3713

For Your Nearest Dealer



CIRCLE READER SERVICE 2

BOOKS, MANUALS PUBLICATIONS

COMPUTERS MADE EASY

Satisfaction Guaranteed Books on understanding and using computers. A variety of topics are available. Write now for a free brochure: Computer Publishing Enterprises, Dept H018, Box 23478, San Diego, CA 92123

HomeWork-The monthly newsletter for home businesses-networking, ideas, help-1 yr \$48. HomeWork Dept HOC, 4871 N. Congress, Suite 246, Lantana, FL 33462.

Looking for new clients? Look into the FREELANCE JOURNAL & JOB MARKET Nat. Newsletter. Send \$2 for sample. 7510 Sunset Bl., Ste. 244, LA, CA 90046

HOME OFFICE SHOPPE

If You Are Looking For Ideas To Start A Business, Need Products Or Want Business Services, **Read The HOME OFFICE SHOPPER Every Month!**

NEED HELP WRITING business materials? Free brochure. Call 1-800-359-0322; Dan Morgan, PO Box 1521, Lombard, IL 60148

COMPUTERS FOR NOTHING? Note quite . . . But we can save you hundreds of \$\$\$!

COMPUTER SENSE NEWSLETTER COMPUTER SENSE NEWSLETTER
takes the mystery out of prices when you buy your
computer or related equipment. Computers,
printers, drives, monitors, boards, software, AND
MORE! Thousands of listings. \$9.95 for trial issue
or \$99.95 for 12 month subscription.
Cybertrol Systems, Inc.
Box 70391, Bellevue, WA 98007. 1-800-552-4459.

BUSINESS OPPORTUNITIES

GUARANTEED BUSINESS OPPORTUNITIES with your PC. I've done it—let me show you how. FREE details! Rush \$1 (P&H) to DLMW, Box 394, Bronxville, NY 10708

Work-at-Home. 1000 companies hiring homeworkers-computer & other skills Specific job leads - Who's hiring-pay-benefits. Send 25¢ stamp. Facts: 2102 Whispering, Round Rock, TX 78664

HOW TO MOONLIGHT WITH COMPUTER Free information. Must reading for everyone wanting their own business. AICTF, Box 2615, Pasadena, CA 91102

INFORMATION DOLLARS! Sell Information by mail. Outstanding Home Business Computing Idea. Earn up to \$3000/mo or more part time. FREE details. InfoResources, 270 Curtin Ave., #H8, W. Islip, NY 11795.

PERSONAL COMPUTER OWNERS CAN EARN \$1000 to \$5000 monthly selling simple services performed by their computer. Work at home—in spare time. Get FREE list of 100 best services to offer. Write: A.I.M.C.T., Box 60369, San Diego, CA 92106

MAKE MONEY WITH YOUR HOME COMPUTER! New book describes hundreds of ideas and tips NEVER SEEN IN PRINT BEFORE. Don't miss it! FREE Info TODAY! InfoResources, 270 Curtin Ave. #H8A, W. Islip, NY 11795

Your BUSINESS OPPORTUNITY advertisement could be seen by the 1½ million entrepreneurs who read HOME OFFICE COMPUTING MAGAZINE every month!

You get a guaranteed 100% audience of the fastest growing segment of buyers today, Call 212-979-0728 today to place your ad.

START A HOMEBASED BUSINESS WITH YOUR PC NEW RELEASE. Send name and address to Autofax, 1009 NE 4th, Moore, OK 73160

EARN GOOD MONEY AT HOME! Make profits while helping others recover lost government refunds. Requires: IBM/Compatible, hard disk and WordPerfect 4.2 or 5.0. Send \$25.00 + \$1 shp (Check/MO) for 5¹/₄" disk & manual, or SASE for info to REFUND, PO Box 5042, Woodridge, IL 60517 Please specify 4.2 or 5.0

FINANCIAL INDEPENDENCE! Use your PC & modem to earn BIG money. Profitable home based business. Exciting details \$2.00. Larry, 1088 Irvine Blvd. #142, Tustin, CA 92680.

FREE 51/4" IBM/COMP WORK AT HOME DISK Complete Plan. No exper. necessary. \$1 S/H A&M Dist., PO Box 83254, San Diego, CA 92138

MAKE MONEY IN YOUR OWN HOME

Start Your Own Shareware Company Small Investment—Large Profit For Details: Shareware Dist., PO Box 187, Moravian Falls, NC 28654-0187. 919-921-2256.

Thinking About Starting A Home Business? For free info that will save and make you money, write: SRM, 25825 104th Ave, Suite 382, Kent, WA 98031

Mail + You = Business Opportunity For Information Send \$1.00 To: Marlin Co, Box 462, Leslie, MI 49251

WORK AT HOME \$339.84 WEEKLY Free Details. Send 2 long self-addressed stamped envelopes: Amy Robinson, Dept C, 743 Mechanic St., Lebanon, PA 17042

Profitable resume service with your PC at home. Free Details. Lloyd's, 14027 Adams Circle, Omaha, NE 68137

Start A Super Profitable Business From Your Home It's Easy. Free Details. WPC, PO Box 42085, Richmond, VA 23224.

EARN EXTRA INCOME WITH IBM COMPUTER \$5 BRINGS SAMPLE DISK AND DETAILS! FOR INFO WRITE DML ENTERPRISES, DEPT 2 PO BOX 1026, BRIGANTINE, NJ 08203

\$97,500 yearly "hidden in your computer?" Yes! Free report Simpson, 771C, Battle Ground, WA 98604-0771

DISCOVER THE OPPORTUNITIES for information brokers, desktop publishers and other information entrepreneurs. Trial subscription, \$1. THE WHOLE WORK CATALOG, Box 297HD, Boulder, CO 80306

SENSATIONAL OPPORTUNITY! F/PT-CONT. EMPLOY GRD. FLOOR! UNIQUE MLM SVC! DETAILS: \$1, FMJ, BOX 10696, OAKLAND, CA 94610

ATTENTION ENTREPRENEURS

Be A Part of Publishing's Fastest Growing Market

Printing Personalized Children's Books

...low startup costs...high profits...make a book in only 4 minutes...use your IBM compatible or Macintosh... full color illustrations...hard covers... dealerships available — only \$2495.

> ABOUT ME! 830 N. Glenville Drive Richardson, Texas 75081 (214) 231-3598

Laser Toner Recharge



Start your own Recharge Business Full or Part time in this lucrative toner recharge industry

FOR ONLY \$49.50! (s & h \$4., CA Res add 6.5% tax)

A complete training manual with over 40 details, photos & diagrams. We supply toner, supplies and support.

Call or Write Today (818) 567-0078 24 HR

M & D International, Suite B 859 N. Hollywood Way Burbank, CA 91505

CIRCLE READER SERVICE 4

MAKE MONEY WITH MICROCOMPUTERS SUBSCRIBE TO COMPU-VENTURE. SEND \$2./sample or \$12.00/6 issues. MSC, Box 1039-F8, MT. Vernon, NY 10551

NEW BUSINESS OPPORTUNITY CLEANING COMPUTER SYSTEMS

Start and Operate a Profitable Home Business Cleaning Computers in your spare time. No Capital or Experience necessary. Join the list of Successful beginners.

Write today for FREE DETAILS or Send \$17.90 for complete instructions.

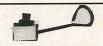
MAILMART 4020 Wyalong Way #F8, Sacramento, CA 95826

CIRCLE READER SERVICE 3

COMPUTER REPAIR

Repair your own Computer, Monitor, Keyboard and Disk Drives easily with our unique Repair Flowcharts for all machines. Free error code and cleaning guide with your order. Don't get ripped-off on repairs again. Diagnose and repair your own system easily. \$12.95. Computer Care, 3669 Grand Ave., Oakland, CA 94610.

PHONE ACCESSORIES



SAVE MONEY

on your bills for telephone and modem use **TELEPHONE/MODEM JACK LOCK**

pays for itself and gives you continuous control of your telephone and modem costs. E-Z on/off uses a small removable wrench that can be worn on your key-ring. \$10 for 1 or special \$15 for 3! Free Shipping May Engineering 19842 Ave of the Oaks, Newhall, CA 91321

CIRCLE READER SERVICE 13

BUSINESS SERVICES

DESKTOP PUBLISHING RESOURCES Low Cost Scanners-ClipArt-Software-Books FREE NEWSLETTER—602-730-1232 156 W. Caroline Ln., Tempe, AZ 85284

FORMING SPECIAL DATABASE USER GROUP
New method-Use you own words
No programming language to write
all your programs. Details Free
Send name/address to DUIMINT 21650 Burbank Blvd. 110D, Woodland Hills, CA 91367 USA. Fax 1-818-716-0612.

NEED A NAME FOR YOUR TRADEMARK? WANT TO REGISTER A TRADEMARK BUT DON'T KNOW HOW?

We are Specialists with over 10 Years Experience In Creating and Registering Trademarks.

FREE CONSULTATION

S and J Marketing & Merch. Division of Cuddlewear Inc. P.O. Box 1818, Brooklyn, NY 11202 Phone & Fax: 718-615-2277

HOME OFFICE SHOPPER

If You Are Looking For Ideas To Start A Business, Need Products Or Want Business Services, Read The HOME OFFICE SHOPPER Every Month!

Advertising Material Promotional Literature

Well designed, high quality advertising material and promotional literature need not be expensive.

Mail, phone or FAX for a free brochure. Ask for our offer H-986.

Logo • Letterhead • Business Cards Booklets • Brochures • Flyers Catalogs • Direct Mail Packages Display Advertising, including Yellow Pages Trade Show Handouts • Newsletters Directories • Pamphlets • Manuals Graphic Design • Technical Illustration

1854 Lockhill-Selma, Ste 101

San Antonio, TX 78213 (512) 340-3945 ■ FAX (512) 340-0719

CIRCLE READER SERVICE 6

FAX MACHINES

NEW SHARP FAX FO-220 ONLY \$899.00! GREAT DISCOUNTS on Sharp, Murata, Ricoh, Toshiba, Canon & Panasonic. FAX PAPER as low as \$34.95 per 6-pack. ArtgrafiX Warehouse 1-800-443-4421 VI/MC

PHA X switch

THE BIT PHAXSWITCH IS AN **AUTOMATIC SWITCH THAT ALLOWS** YOU TO RUN A PHONE AND

A FAX ON ONE **TELEPHONE LINE**

- Use a fax at home without having to install a second line.
- Save telephone line costs in the office.
- PHAXswitch answers an incoming call (silently), decides if the incoming call is for the phone or the fax, automatically puts it through to the correct unit, and rings the phone or fax as usual.
- · Outgoing calls are automatically connected. Pick up the phone and PHAXswitch switches you through. Send a fax and PHAXswitch connects the fax machine to the line.

SALE PRICE - \$229.95

CALL FOR MORE INFO. OR TO ORDER

1-800-433-7068

MARKET DATA CORPORATION 3910 1960 W. #220 • HOUSTON, TX 77068

CIRCLE READER SERVICE 8

BUY YOUR FAX MACHINE AT DISCOUNT PRICES Major name brands from \$725.00. Unbeatable service. FAX CITY is the original FAX mail order house 1-800-426-6499 national: NC 1-800-633-0851

BRAND NEW FAX MACHINES

Full factory warranty Sharp, Toshiba, Panafax, Ricoh All major manufacturers in stock Call THE FAX HOTLINE TODAY! 1-800-345-FAXX

Dealer Inquiries Invited—Quantity Discounts On-Site service available, MC/VI Welcome

CIRCLE READER SERVICE 9

DISCOUNT FAX MACHINES

NEW MACHINES WITH FACTORY WARRANTY

MURATA M1200 \$739 | SHARP FO-300 \$1139 SHARP FO-220 \$969 SHARP FO-420 \$1279

Don't overpay for a new FAX machine, buy wholesale direct and save. Local Service and support available. SATISFACTION IS GUARANTEED CALL A FAX EXPERT AT MCS 800 669-1357 MN 612 831-4250

CIRCLE READER SERVICE 7

HARDWARE

MT MARYMAC INDUSTRIES INC.

Radio Shack SCO TANDY

Our 13th Year of DISCOUNTS **COMPUTERS & CELLULAR PHONES**

Fgt Prepaid. Save Tax Toll Free 800-231-3680 22511 Katy Fwy Houston, TX 77450 1-713-392-0747 FAX (713) 574-4567

PAPER

COMPUTER PAPER 9.5 x 11 (8.5 x 11) 2500 sheets, White Bond, \$33.00 DISAPERF ALVER, 817 Dixon Ste 7C, Cocoa, FL 32922 FREE SHIPPING 1-800-999-6442



OFFICE SUPPLIES

HEADEN'S OFFICE SUPPLIES

If it isn't HEADEN, it just isn't wholesale We carry a full line of word processors, electric typewriters, IBM compatible computers, printers, cellular phones under \$1000, and Sharp Camcorders all at wholesale prices. If you're ready to save Alaskan style, give us a call at 800-478-HEAD or 907-337-7373 or simply send \$2 for your wholesale brochure to: Headen's Office Supplies, 6222 E. 12th Ave., Suite C4, Anchorage, AK 99504.

ART FOR OFFICE Fine Art Prints & Posters. Full Color Catalog 136 pages. \$11.50 inc ship (refundable with 1st order) or COD add \$2.75. Rainbow Ent, Box 60144 Palo Alto, CA 94306. Fax (415) 326-5150 800-235-6647 National; 800-235-6646 CA

FURNITURE

Our Quality Stands Alone!!!!

Rated #1 in Quality



Total Retail Cost \$179.05 our Cost Direct 7995

Guaranteed for **Ten years**Compare prices on similar quality
all steel stands and don't be fooled by stands made partially of

ntity Dis

- Neoprene used on printer supports to absorb vibration and noise
 FREE Basket [\$29.95 value] holds up to 75 lbs. of

VISA

- printout Can be shipped economically by UPS! Adjustable legs to conform to any floor or carpet surface Also used for copiers or facsimile machines and laser printers
 Casters available for mobility



Eagle Trading International Corporation
38 Lively Blyd., Elk Grove Village, (Chicago), IL 60007

CIRCLE READER SERVICE 11

HOME WORKS

Quality Modular Computer Furniture For Your Home Or Home Office Low Discount Prices! Satisfaction Guaranteed! P.O. Box 31544 Raleigh, NC 27622



BROCHURE 1-800-544-4902

CIRCLE READER SERVICE 10

INSURANCE



SAFEMARE

INSURES YOUR COMPUTER AGAINST POWER SURGE, BREAKAGE, THEFT

Full replacement of hardware, media, purchased software. From \$39 yearly. Covers fire, theft, power surges, other accidents. Blanket coverage: no list of equipment needed. Low \$50 deductible. Call for information or immediate coverage.

1-800-848-3469 Local (614) 262-0559

SAFEWARE, The Insurance Agency Inc. 2929 N. High Street, P.O. Box 02211 Columbus, OH 43202

HOME OFFICE SHOPPE

If You Are Looking For Ideas To Start A Business, Need Products Or Want Business Services, Read The HOME OFFICE SHOPPER Every Month!

RIBBONS

AUTO-INKER

Re-ink any fabric cartridge or spool ribbon for about 5¢! Universal Cartridge model \$59.95. (specify printer) Ink included. Adapters for additional printers about \$4. Special inker for Imagewriter, Epson, others...\$39.95. **RE-NEW** at \$3.95 ppd will re-ink 30 ribbons (no equipment needed). Ribbons & reloads available. V-Tech, Inc. 2223 Rebecca, Hatfield, PA 19440. 215-822-2989

CUT RIBBON COSTS

Re-ink your printer ribbons quickly and easily. Do all cartridge ribbons with just one inker! For crisp, black professional print since 1982. Choose from 3 models. Prices start at just \$39.50

BORG INDUSTRIES, Janesville, IA 50647 1000's satisfied users in 5 years!

Toll Free 800-553-2404/In Iowa 319-987-2976

CIRCLE READER SERVICE 14

SOFTWARE

NEW! Special application IBM compatible software for professionals, technicians, and hobbyists. Free catalog. INNOVATIVE SOFTWARE SOLUTIONS BOX 17554-A, GREENVILLE, SC 29606.

USING A PC IN YOUR HOME BASED BUSINESS?
IRS Requires Log of PC Business Activity.
PC Logging Software—\$14.95
\$5 Demo Disk Available. FREE Details.
NJ5J Datasmith Inc., Suite 234,
1102 Enterprise, Grand Prairie, TX 75051
VISA/MC — Call 1-214-660-1873 to order

MAIL ORDER MASTER
OFFERS HOME MAIL ORDER BUSINESS ALL THE
COMPUTING ROUTINES IT NEEDS. \$10 DEMO WEINER CORP. 1700 CATALINA AVE., SEAL BEACH, CA 90740. 800-874-4656 or 800-874-2827 CA

BERT ACCOUNTING SYSTEM. IBM/COMPATIBLE INCLUDES all accounting functions customized for any business. User friendly. \$2 for sample disk BERT, Route 10, Box 326, Vicksburg, MS 39180

HOME OFFICE ADVANTAGE

Manage your time, projects and your home office with this set of easy to use software tools. Includes time and priority management, calendar with schedule, office inventory, and complete set of desktop tools. Req IBM PC/Compat, 512K, dual drive or hard drive. ...\$49.95 + \$5 S & H. JG Bosco & Associates

PO Box 748, Mundelein, IL 60060 312-941-2112

SOFTWARE LIBRARY

Review/Evaluate Software Before Purchase Huge professional library of COMMERCIAL programs and SHAREWARE. Absolutely the best rental prices anywhere! No minimum. Satisfaction guaranteed. Send \$2.00 for disk catalog. You'll be glad you did!
SOUTHERN SYSTEMS
PO Box 560789

Charlotte, NC 28256

AXS ACCOUNTING SOLUTIONS

The ultimate accounting package for business and personal use. Spend less time bookkeeping. Use it to write checks, make deposits, pay vendors, bill customers, track assets, liabilities, net worth, revenues and expenses. Users of other packages are switching to AXS. It is simply the easiest, most powerful and affordable. IBM or compatibles. Special Offer for CPAs & Dealers. 30 day money-back guarantee.

Level 1: general ledger, check writer, mail manager. (\$59.95)

Level 2: adds accounts payable and receivable. Real time. Integrated. (\$139.95)

Free information, free video (\$9.85 deposit), trial version (\$18). **Computer Trends 800-544-2597**

CIRCLE READER SERVICE 15

EASY INVOICING

Simple yet Powerful Customer Billing, Receivables, Letters, Labels Software for IBM PCs. Who needs complicated G/L? Special Magazine Offer: \$89.95 (U.S.), \$9.95 demo on 3½" or 5¼" disks. 9,99 demo on 372 of 374 disk: Send check or money order to: MRO PRODUCTIONS 23704-5 El Toro Road #377 El Toro, CA 92630

Get the power of the hour.

IMESLIPS III can track, bill and analyze all the time that used to vanish each billing period. It can help you increase your billable hours by as much as 25% and ... it's even fun to use.

TIMESLIPS III has a built-in stopwatch, customizable bill formats, full accounts receivables and a custom report generator. It also produces client mailing labels, roledex cards and file folder labels.

There's also an entire family of TIMESLIPS III PC products, including an accounting software link, a network version, even a spell checker.

TIMESLIPS III MAC & PC are available at

Timeslips III

software dealers nationwide or order directly for only \$299.95 at 1-800-338-5314 (in MA 508-768-6100)

NORTHEDGE

239 Western Ave - Essex, MA 01929

CIRCLE READER SERVICE 16

TONER CARTRIDGES

TONER CARTRIDGE RECHARGING Everything you need to know!! Call for FREE info package. 301-989-9727

BOOKS/MANUALS/ **PUBLICATIONS**

TI99/4A Owners: MICROpendium is a monthly only for the TI (since 2/84) \$20/year or \$2.50 for sample. Box 1343. Round Rock, TX 78680, 512-255-1512

COMPUTER BOOKS CATALOG! Over 300 titles. "Using 1-2-3 Special Edition" "Running MS-DOS 4th Edition" and more. Catalog \$2. (refundable with order) or SASE for top 20 best sellers. Doyle Systems, 12178 Greenspoint Dr. #318, Houston, TX 77060.

HARDWARE

IBM PC Jr. OWNERS Free catalog of products.
_Glass Business Equipment. 505-865-9878 PO Box 287, Highway 47, Peralta, NM 87042.

COMMODORE/AMIGA CHIPS, PARTS, DIAGNOSTICS, REPAIRS. (low cost C-64-\$49.95 + UPS). Heavy Duty C-64 Power Supply-828 + UPS. Kasara Microsystems (div. of QEP) 1-800-248-2983.

IBM PC OWNERS-Free Info on Best Printers Hard Disks, Scanners, Mice. 1st Quality Computers Bx 6482 San Pedro Ca. 90732

CLASSIFIED

IBM PCjr SPECIALS

- Full line of IBM PCjr Hardware
- * Memory Expansion to 640K * Second Floppy Drives
- * Parallel Printer Ports
- * Full Size Keyboards
- * Modems, Int. & External
- * Joysticks, Serial Cables
- * PCjr Network cards
- BASIC Cartridges, Mice * PCjr Tested Shareware
- * Complete Computers
- * Repair Service

Send for Catalog Today COMPUTER RESET Dept HOC

P.O. Box 461782 Garland Texas 75046 214-276-8072 (Fax 214-272-7920)

PC jr Owners

Everything you'll ever need!

- Sidecars Which Increase Memory to 736K Second and Third Drives Which Snap on Top
- Drives Which Read and Write 1.2 MB AT Diskettes
- 31/2 inch Disk Drives Which Store Up to 813K
- 20 MB Hard Drives Which are DOS Compatible

- ROMs Which Make your Display Easier to Read
 Upgrades Which Expand 128K Sidecars to 512K
 Speed Up and Pseudo DMA Cartridges
- Clocks, Printer Ports & Speech Attachments Joysticks, Optical Mice, and Light Pens
- Adapters to Use your PCjr Monitor With a PC
- Switching Boxes for Monitors or Serial Devices
- Full Size Keyboards & Numeric Keypads
 Keyboard, Modem, Printer, and Monitor Cables
- Basic Manuals and also Cartridge Basic
- Game Cartridges, and Other Software

Plus much much more. Call, write, or circle our reader service number for a FREE catalog of PCjr add-on products.

C Enterprises PO Box 292, Belmar, NJ 07719 1-800-922-PCJR or (201) 280-0025

MUSIC

IALLY AN AFFORDABLE

includes: Keyboard Interface Software

The CMS-1 is a complete Midi Studio which includes everything! Keyboard, interface and software. The CMS-401 Interface is Midi compatible with over

a 100 music programs.

CMS Enhanced Cakewalk software has the best value for the money, The Casio MT-540 keyboard is able to play 4 parts simultaneously.

If you already own a Midi keyboard, the CMS-401 interface and CMS **Enhanced Cake**walk is available

for only \$249.00



"Cakewalk beats higher priced sequencers in many functions and is a great package for the money.

Make sure the program you're buying is the actual program that recieved PC Magazine Editor's Choice.

1 800 322 MIDI
COMPUTER MUSIC SUPPLY

382-B N. Lemmon, Walnut, CA 91789. Tel:714-594-5051 VISA • MC • AMERICAN EXPRESS

CIRCLE READER SERVICE 18

PUBLIC DOMAIN AND SHAREWARE

SUPER SOFTWARE

IBM Shareware. Free Catalog or send \$6.00 for 3-disk catalog describing over 900 programs, SDC's membership discount program & more. Write to SDC. Dept. FC, PO Box 10249, Austin TX 78766. Money Back Guarantee.

FREE ADAM / IBM / C-64 / TI99 CATALOG SPECIFY COMPUTER MCP SOFTWARE PO BOX 64 MARLTON, NJ 08053

TRS-80 COLOR COMPUTER SOFTWARE! 50¢ PROGRAMS! FREE CATALOG. T-D PO BOX 1256. HOLLAND, MI 49424.

FREE CATALOG

IBM SOFTWARE
Public Domain & Shareware. Write today!
CENTRAL MICRO SOLUTIONS
P.O. Box 2675-C, Columbus, OH 43216

FREE PROGRAMS! IBMs/TRS80s/Appls/C'dores/Ti99 Adam/Timx. Send stamps. Rothschild decontrolr shareware! Ezra, Bx 5222AU, San Diego, CA 92105

TANDY 1000. Programs/Newsletter Send for Info. Soda Pop SW, P O Box 653, Kenosha, WI 53141

SHAREWARE FOR IBM/COMPATIBLES, 5¹/₄" For catalog send SASE: Desert Diskware, PO Box 9399, Scottsdale, AZ 85252

CLASSIFIED

IBM-PC Software for only \$.75 per disk 3.5" available. Free catalog. PILSL-HOC, 8012 S. 75th E. Ave., Tulsa, OK 74133

IBM COMPATIBLE SHAREWARE

Tired of shareware company gimmicks and tricks like membership fees and minimum disk requirements? Tired of no support after your purchase? ments? Tired of no support after your purchase? Welcome to the different shareware company. Toll-free ordering! No membership fee! No disk limit! Complete technical support. Before you buy into another gimmick, call toll-free for a free catalog with thousands of programs for your IBM compatible. Paragon . . . PC software, 1-800-426-3061

YOUR IBM & COMPATIBLE SHAREWARE DISTRIBUTOR

Over 500 in library, 51/4" & 31/2" avail. Send 50¢ in stamps for cat. T&Z Soft., PO Box 780217F Sebastian, FL 32978-0217. Approved Vendor of the Association of Shareware Professionals.

> 700+ IBM-PC PD/Shareware Disks. \$1.-\$1.50 Per disk copy fee. Send for free directory disk to MICKIR, A-FC, 14210 Cornelia, Cypress, TX 77429.

51/4" IBM SOFTWARE - \$1.50 PER DISK OR LESS For Free Catalog, Write: Pro Disk, PO Box 223, Dyer, IN 46311

IBM PUBLIC DOMAIN & SHAREWARE SOFTWARE As low as \$2.25 per disk. FREE CATALOG QSE, PO Box 5653, Springfield, VA 22150

BUY 3 IBM SOFTWARE GET 1 FREE. Large library: games, graphic, CAD, DTP, OMNICOM, 6161 El Cajon Blvd. #B203, San Diego, CA 92115

FREE PD SOFTWARE (C-64). Send One stamp for catalog or \$2 for catalog & 30 samples (Refundable). RVH Publications, 4291 Holland Rd. Suite #562-F Va Beach, VA 23452

IBM SOFTWARE

From \$2.00 Per Disk 5½" & 3½" Formats. Free 24-Page Catalog.

SOFSOURCE

Box 828, East Lansing, MI 48826 1-800-338-2118

CIRCLE READER SERVICE 19

FREE

SOFTWARE CATALOG

Buy or Rent \$1/disk
Over 1000 IBM quality software
On 51/4" and 3.5" format.
For fast service

Write to: SOFTSHOPPE

P.O. Box 709, Ann Arbor, MI 48105 (313) 763-8721

CIRCLE READER SERVICE 20

FREE **IBM SOFTWARE**

51/4" AND 31/2" **FORMATS** FREE CATALOG:

AP-JP INC. BOX 1155, W. BABYLON, NY 11704

CIRCLE READER SERVICE 21

IBM SOFTWARE CATALOG OF 800+ DISKS

Orders shipped same or next business day! \$1.99 a disk/no minimum. CALL or WRITE NOW (24 hours)

1-800 521-7999 In CA. (213) 466-2146

G.E.B. 1626 N. Wilcox Ave. #922-H, Hollywood, CA. 90028

CIRCLE READER SERVICE 22

FREE IBM SOFTWARE

FREE CATALOG also contains shareware. 51/4" & 31/2". All categories. Business, accounting, word processors, desktop publishing, spreadsheets, engineering, CAD, graphics, languages, utilities, medical, health, church, education, home.

SECTOR SYSTEMS COMPANY, INC., DEPT-HC, 416 OCEAN AVE., MARBLEHEAD, MA 01945

(617) 639-2625

CIRCLE READER SERVICE 23

OUTSTANDING IBM SOFTWARE ONLY \$2.50/DISK or Less

The Best of Shareware and Public Domain Programs. 5.25" and 3.50" formats.
Orders shipped First Class Within 24 hours Satisfaction guaranteed.

Write or call for FREE CATALOG or Send 75¢ in stamps for a disk Catalog and sample programs A.C.L. (916) 973-1850

1621 Fulton Ave., Suite #35-F8, Sacramento, CA 95825

CIRCLE READER SERVICE 24

SOFTWARE

Software companies need help testing new programs. Exciting benefits. Free Info. SoftTest, Box 669653, Marietta, GA 30066

EEZY-BUDGET FOR IBM-PC/XT WITH GW BASIC. Menu driven, easy-to-use home budget program.
Manual included. \$12.95 + \$2 s/h to
Kristen Enterprises, PO Box 675401,
Marietta, GA 30067-0015.

TIEBREAKER SOFTWARE

Complete MERRIAM-WEBSTER wordlists/programs for IBM-PC/Compatibles. Send \$3 (Refundable) Texarkana, TX 75505-5929

ADAM EARNS YOU XMAS \$\$\$\$
ADAM & YOU MAKE APPEALING XMAS GIFT! ADAM & YOU MAKE APPEALING XMAS GIFT!
For Just \$99 You Can Earn \$2,500 + P/T
Free info or \$10-VHS-video-demo . . . Write:
Ultimate Ltd., Box 426, Apalachin, NY 13732
Early Birds Get Best Locations . . Act Now!
(Demo-tape \$10-cost applied to \$99 price)

EARN \$\$\$ WITH YOUR COMPUTER AT HOME

Exciting new part time opportunities working with an established software marketing company. Will teach. For info send 45-cent SASE to: COMPUTER, PO Box 1442-HC, Orange Park, FL 32067

CHILDREN'S SOFTWARE

Over 100 quality educational programs. IBM, Apple, C64, TI99. SASE for brochure. KIDWARE

1380 156th NE #H2, Bellevue, WA 98007

ADAM & C-128 SOFTWARE

Send business size SASE to: ADAMagic 1634 N. Thompson Dr., Bay Shore, NY 11706

NT BIBLE, CONCORDANCE & SEARCH KEY IBM & MAC, SPECIAL \$63.50, COMSPEC BOX 5601, EVERETT, WA 98206

CLASSIFIED



with GAIL HOWARD'S SMART LUCK COMPUTER SYSTEMS™ Order the system purchased by Florida's \$23.4 million lottery winner.

COMPUTER WHEEL" - An absolute must for every serious lottery player 514"-\$29.95+\$2 s/h; 31/2"-\$32.95+\$2 s/h

COMPUTER ADVANTAGE" - Proven to be the most successful number selection system ever devised for beating the odds in Lotto. 5%"-\$39.95+\$2 s/h; 3½"-\$42.95+\$2 s/h

SMART LUCK COMPUTER SYSTEMS
P.O. Box 1519 - Dept. H-8 - White Plains, NY 10602
312/934-3300

CIRCLE READER SERVICE 25

The only full service supplier for

New programs introduced continuously that can only be purchased through the M.W. Ruth Co. Also Amiga & Atari ST Products

M.W. Ruth Co. 3100 West Chapel Ave. Cherry Hill, NJ 08002

609-667-2526

MC/VI

CIRCLE READER SERVICE 29



\$\$ WIN \$\$ with our **SPORTS**



Handicapping Software HORSE RACING Handicapping - \$32.95, \$52.95, \$67.95. GREYHOUND Handicapping - \$32.95, \$52.95, \$77.95. Up to 17 entries analyzed: class, speed, times, odds, track, post, stretch, & finish, PRO FOOTBALL, BASE-BALL, BASKETBALL Software - \$52.95 each, Handicap racegames in minutes. For Apple 2/Mac, Atari, IBM PC, COM 64/128.

SOFTWARE EXCHANGE, Box 5382-F, W. Bloomfield, MI 48033. Info/or. ders. 313/626-7208. VISA/MC. 1-800-527-9467.

ADAM * APPLE * LASER * IBM *

Hardware, Software and Accessories Discounted Prices—Send for FREE Catalog Alpha-One Ltd. Dept. F8 1671 E. 16th St., Suite 146 Brooklyn, NY 11229

718-692-4120

CIRCLE READER SERVICE 26



NEMESIS[™]Go Master® The only Go program to

successfully imitate human play.

Toyogo, Inc. 76 Bedford Street,#34-H Lexington, MA 02173 \$79 Go Master + \$6 S&H (617) 861-0488

Go has been a way of life in the Orient for over 4,000 years. As much a philosophy as a game, Go is considered by many to be the secret of Japanese success.

"While chess is a game of war. Go is a game of market share." President Nikko Hotels

CIRCLE READER SERVICE 27

STAMP, COIN & BASEBALL CARD **COLLECTORS!**

We have the ideal program for you!



Call or write for FREE catalog describing the most popular software for inventorying and evaluating your collection. Includes automatic pricing.

COMPU-QUOTE
6914 Berquist Ave. Canoga Park, CA
91307 Dept. CH (800) 782-6775 Ext. 35
In CA (818) 348-3662

CIRCLE READER SERVICE 28

IBM PS/2 SOFTWARE (Hard Disk Required) 90 programs for home. Free info. Shankle Systems 6608 SW 100th Lane, Gainesville, FL 32608.



BE A LOTTO MILLIONAIRE!

New Lotto Picker Plus v2.1 stores winning Lotto & Pick 3/4 numbers & uses probability analysis in order to select what might by your million \$\$ ticket. Guaranleed to work for all lotteries worldwide. Not copy protected. For IBM, 64K Apple II, & C64/128 \$34.95 (+5.55 sh). 3.5" add \$10. GE RIDGE, 170 B'dway, #201HO, NYC, 10038, ORDERS 1-800-634-5463 ext. 293. Info 718-317-1961, NY. res. add tax.

NEVER LOOK UP AGAIN..

for the time or the date! SHOWTIME lets you keep track of the time without taking your eyes from the screen or your hands from the keyboard. Time and date always in the upper right corner of your screen.

SAVE YOUR SCREEN FROM **BURNOUT!!!**

SHOWTIME allows you to automatically blank your screen after an interval of no keyboard input. You set the delay interval from 10 seconds to 45 minutes. Screen restores instantly with any keystroke
Only \$19.95 Specify AT or XT
SHOWTIME, Bugfree Software, Box 7857, Rego
Park, NY 11374. Money Back Guarantee!
EXTRAS: CODs \$3.00; 3½" disk \$1.00

USERS' GROUPS

#1 ADAM USERS GROUP—Newsletter, tech info, much more. Info: JF-#1 ADAM USERS GROUP, Box 3761, Cherry Hill, NJ 08034. 609-667-2526

World's Largest Software Library For Apple, IBM PC. Write: Reliant PO Box 33610, Sheungwan, Hongkong

A CLASSIFIED AD CONNECTS **BUYERS AND SELLERS** COST-EFFICIENTLY

The best value for your advertising

dollars is an ad in the CLASSIFIED. Your ad will reach 1.2 million buyers and cost only pennies per thousand. Smart advertisers know good value when they see it. HOME OFFICE COMPUTING CLASSIFIED offers the value that enables you to plan an ad campaign that benefits you! Connect with the buyers who read HOME OFFICE COMPUTING CLASSIFIEDS today.

> CALL 212-979-0728

HOME OFFICE COMPUTING AD INDEX

ACL	86
ADI	82
AEG Olympia	61
AP-JP Enterprises	86
Ad Designers, Inc.	84
Alpha-One Ltd.	87
Archive	2
Ashton Tate	36
Borg Industries	85
Broderbund	9
Broderbund	C3
CMS	86
Citizen	7
Complete PC	5
Compu-Quote	87
CompuServe	C4
Computer Friends	6
Computer Trends	85
	82
Computing Aids	and the same of th
Contact Software	17
Cougar Mountain Software	69
Crutchfield	14
D.T.G.	71
Eagle Trading	84
Formworx	15
G.E.B.	86
Great American Software	25
Hayes	31
Home Works	84
Intuit	67
M & D International	83
M.W. Ruth	87
MCS	84
Mailmart	83
Market Data Corp.	84
May Engineering	83
Microstar	81
Mitsubishi	18-19
Natural MicroSystems	29
NEC	13
NRI	33
North Edge SW	85
Origin Systems	75
PC Enterprises	85
S & J Marketing	83
Safeware	84
	27
Schwab, Charles & Co.	2
Sears Roebuck	
Sector Systems Co.	86
Sharp	65
Smart Luck	8
Sofsource	80
Softshoppe	80
Software Publishers	59
Star Software	2:
Tandy	C
Tech-cessories	23
The Fax Hotline	84
Toygo, Inc.	8'
Wordperfect	3

NEED SUBSCRIPTION ASSISTANCE?

Please send change of address to HOME-OFFICE COMPUTING, P.O. Box 2511, Boulder, CO 80302. For other subscription problems, please write to HOME-OFFICE COMPUTING, 740 Broadway, New York, NY 10003, Attn: Customer Service.

Neighborhood Fax and Dime

BY NICK SULLIVAN



On the first sunny Sunday last spring, my family and I went to a big neighborhood get-together. About 40 people basked outside at a long table, eating turkey, ham, and splendid sal-

ads. I was talking to the woman next to me about my work, when she said, sotto voce, "You have a fax machine?" Then, at full throttle, "The Sullivans have a fax machine!"

Yes, the Sullivans have a fax machine, and it has not gone unnoticed by the neighbors. In fact, it has helped put us on the map. We are no longer the people involved in some murky computer business; we are the people who have a machine almost as useful as a Rototiller.

The first request to use our fax came well before this public pronouncement, from a stranger who lived in the next town. She was a friend of a friend of a friend who said so-and-so had told so-and-so, and so on. This stranger wanted to use our fax machine on a Sunday. Very important, life and death matter. Well, we didn't even have a fax machine then. We had just told someone at a party we were getting one. I *must* be less garrulous at parties.

When the fax arrived, my friend the tomato farmer was the first outsider to use it. He was trying to patch together a deal for some greenhouse equipment from a bankrupt hydroponic farm in New York, and this iffy transaction required instant communications. A few weeks later, my next-door neighbor forgot some business papers at home, and his wife faxed them to his office. Having experienced firsthand the ease and excitement of faxing, she soon came back to send off her spring seed and flower orders. Then an illustrator who lives down the road faxed drawings to a magazine in the Midwest.

So you can see that business is definitely picking up at the ol' Fax & Dime. I don't get more than two customers a month, but I've got yellow stick 'em paper above the fax so they can record their phone calls and I can get paid back. What amazes them, and even me as proprietor, is how little fax transmissions cost. On my current tote board I list calls for \$.56, \$.77, \$.62, and \$.24—the last

NICK SULLIVAN is a senior editor who telecommutes to the New York office from Massachusetts. He can be reached on CompuServe (ID: 76703,744) or on MCI Mail (ID: NSULLIVAN).



We are the people who have a machine almost as useful as a Rototiller.

one cheaper than a stamp.

We don't encourage our neighbors to use the fax as a copier. The woman who had made the announcement at the party called the next day to ask if she could make copies of 50 business papers. My wife explained that the fax machine's copying function wasn't that great, which apparently scared her off. What my wife was really saying is that paper is expensive and disappears fast enough as it is.

At the same time that friends and neighbors have discovered our useful office machine, they have come to believe that it's necessary to have offices in their homes as well. This is not because of anything we've said or done, but a sign that the prevailing winds of change have reached this rural seacoast community.

A few years ago the sentiment here was, "Computers? I don't have the faintest idea how they work." In truth, neither did I. I'd say, "I'm not in the computer business, I'm in the magazine business." But my words hung in the air, while people walked away muttering, "One of these days." That day has come. And once they decide to set up a home office, they say, "We must talk to the Sullivans."

The outdoor party we attended was actual-

ly a housewarming. As the owner took me on a tour, he walked into an empty room, spread his arms, and said, "And this is my office. I've got to talk to you about a computer. You see, I want to start this business...." He's a doctor who wants to start a medical-equipment mail-order business. I think he needs a color Macintosh with a two-page monitor. Don't you?

That same week my wife decided that our yard needed landscaping (no one could find the front door), so she called a landscaper designer we know. To prevent marital discord, she likes to use the outside-arbitrator approach; in this case, the arbitrator turned out to be a barterer. He refused to take money for his services, but wanted to trade in kind for home-office consulting. "I'm going to be setting up an office soon," he told my wife, "and will need advice." So you can see the ol' Fax & Dime might do some consulting on the side.

Another Sunday we dropped in on some friends who are building a house. We barely had a chance to take our hats off before they were giving us the tour. "Here's the kitchen, the dining room, the living room—and this is my office," said our friend, who runs a boat-building shop. "Just big enough for a computer." Not so long ago, he was one of the head shakers. I think he needs project-management software to stay on top of his boat-building details. Don't you?

Things have gotten so out of hand around here that even the carpenters and electricians have Macintoshes. A few years ago these were wild-eyed guys, independent types who didn't pay taxes and wouldn't do jobs they didn't like. Now they have employees, contracts, computer-generated estimates, and they draw building plans with *MacDraw*. Next thing you know they'll have fax machines in their shops. But they'll probably try out mine first.

All these developments make me feel more at home. Before, I always thought people considered me either a computer genius or independently wealthy. Why else would I be in my bathrobe analyzing my dreams when everyone else was driving to work? In fact, I'm neither a genius nor wealthy—just an independent computer user trying to make a living, like a lot of other people around here. Now I'm beginning to fit in.

I find it exciting that a rural community can harbor such varied and lively enterprises—without office buildings and mini malls and increased traffic. It's a sign of the times—and the sign's not neon. ■

THE TREASURES OF THE WORLD ARE DISAPPEARING RIGHT FROM UNDER OUR NOSES! WHO WILL STOP CARMEN AND HER DEVIOUS COHORTS?



Catch Her If You Can!

Nothing is sacred to the notorious Carmen Sandiego. She and her gang have already swiped a warehouse full of treasures, from the Sphinx to the Statue of Liberty's torch. And now you have been assigned to capture them.

Start out at the scene of the crime, questioning witnesses. To help you decipher the clues you uncover, each of these award-winning games includes a reference book filled with maps and information.

As you track the culprits, you'll sharpen your thinking skills. At the same time, you'll learn fascinating things about the geography, history and culture of the places you visit.

Each adventure has a different gang of thieves. So collect all three and have three times the fun! WHERE IN THE WORLD IS CARMEN SANDIEGO?® Explore the world's great cities, chasing Carmen's gang. Use Interpol's Crime Computer to get arrest warrants. Includes *The World Almanac*.®

WHERE IN THE U.S.A. IS CARMEN SANDIEGO?[®] Carmen and her gang are stealing America's national treasures, and you're on their trail. Includes *Fodor's*[®] *USA* travel guide.

WHERE IN EUROPE IS CARMEN SANDIEGO?™ Carmen strikes again! This time, it's the 34 nations of Europe. To help you, you'll have the Rand McNally® *Concise Atlas of Europe* plus an on-screen Fact-finder's Database and Crimestopper's notebook.

Carmen Sandiego products are available for Apple, Apple IIGS, IBM PC/Tandy, Macintosh, Amiga and Commodore computers for suggested retail prices of \$34.95-\$49.95.

For more information about Brøderbund Software and our products, call (800) 521-6263, or write to us at 17 Paul Drive, San Rafael, CA 94903-2101.

Brøderbund*

700CA

© Copyright 1988, 1989 Brøderbund Software, Inc. The World Almanac, Fodor's and Rand McNally are registered trademarks of The Newspaper Enterprise Association, Fodor's Travel Publications, Inc. and Rand McNally and Company, respectively.



Begging your pardon Your Majesty, but the sun never sets on us either.

We're CompuServe. The world's largest network of people with personal computers.

As one of our more than half a million members you will enjoy more privileges and better

service than Her Majesty could ever imagine. Right from your personal computer.

To join us, call 800 848-8199. We'll give you the royal treatment too. **CompuServe**®